HEADQUARTERS, JOINT READINESS TRAINING CENTER AND FORT POLK
Fort Polk, Louisiana

DRAFT
FINDING OF NO SIGNIFICANT IMPACT (FNSI)

ACCESS CONTROL FENCE

1. The findings and conclusions reached in this document are based on a thorough review of the impacts and analysis considered and disclosed in Environmental Assessment (EA). The EA, including its data analysis and conclusions, are incorporated in this FNSI by reference.

2. **PROPOSED ACTION**: The Joint Readiness Training Center (JRTC), Fort Polk, Louisiana, is proposing to construct a security fence beginning in July 2003. The purpose of the proposed action is to provide increased security to the Cantonment Area and support area of the installation. The installation borders public highways, private lands and USFS lands with limited boundary fencing in place. Without proper fencing, the garrison cannot be considered secure from unauthorized access.

3. **ALTERNATIVES CONSIDERED**: In addition to the Proposed Action, the No Action Alternative, Alternative 1, which bisected Mill Creek Training Areas and had a potential to threaten RCW unless construction did not occur during nesting periods, and Alternative 2, which bisected Castor Training Areas were fully considered in the EA. The No Action alternative does not meet the purpose and need of the proposed action. Alternatives 1 and 2 interfere with training.

4. **ENVIRONMETNAL CONSEQUENCES**: Potential impacts to water resources, biological resources and socioeconomic issues were considered and analyzed for the Proposed Action and the No Action Alternative. Based on this analysis of environmental conditions, proposed activities, comparative data from past activities, proposed environmental protection and mitigation measures, and coordination with other agencies, no significant adverse effects to the environment would be expected under the Proposed Action or No Action Alternative.

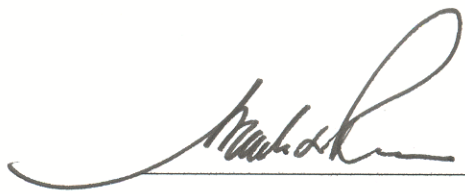
5. **CONCLUSIONS**: I have carefully reviewed the attached EA, proposed action, alternatives and environmental consequences of each. Based on this review, I have determined that the proposed action will have no significant impact on the environment.

6. **DECISION**: In light of the proceeding conclusions, I have decided to implement the Proposed Action. This will allow for the development of a Access Control Fence with appropriate right-of-way, security lighting, cleared areas and access road as described in the attached EA and will allow the installation to meet military objectives to establish a more secure boundary for the installation.

7. **PUBLIC COMMENT**: Additional information regarding this decision may be obtained by contacting the JRTC and Fort Polk Public Affairs Office as listed below.

Public Affairs Office
ATTN: Dan Nance
7073 Radio Road
Fort Polk, LA 71459-5342
nanced@polk-emh2.army.mil

22 MAY 03
(Date)



DEPARTMENT OF THE ARMY
JOINT READINESS TRAINING CENTER AND FORT POLK
FORT POLK, LOUISIANA 71459

ACCESS CONTROL FENCE FOR NORTH AND SOUTH FORT POLK CANTONMENT

ENVIRONMENTAL ASSESSMENT

Approved By:

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Colonel, Infantry
Garrison Commander
JRTC and Fort Polk

Date: 22 May 03

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JRTC and Fort Polk

Date: 7 May 2003

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Major, U.S. Army
Deputy, Provost Marshall's Office
JRTC and Fort Polk

Date: 22 May 03

May 2003

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SECTION 1.0 - PURPOSE, NEED AND SCOPE

1.1 Introduction

The purpose of this Proposed Action is to meet security objectives for the cantonment area, Joint Readiness Training Center (JRTC) and Fort Polk, Louisiana. A complete Access Control Fence (ACF) would be placed around the Fort Polk North and South Fort cantonment areas. Construction of the ACF is scheduled to begin in July 2003. This section presents the purpose and need for the Proposed Action; defines the scope of the environmental analysis and the issues to be considered; identifies the decisions to be made and identifies other relevant documents and actions.

1.2 Purpose and Need for Action

For many years, JRTC and Fort Polk, Louisiana maintained an open door policy with complete public access. Following 11 September 2001, as with many Federal facilities, changes were made at Fort Polk to limit access to the installation. Consequently checkpoints have been established at nine entry points. All other entrances have been blocked with concrete barricades. Vehicles and occupants' personal credentials are checked before access to the installation is granted.

The checkpoints affectively prevent unauthorized vehicular access to the installation. However, because the installation borders public highways, private lands and U.S. Forest Service (USFS) lands with limited boundary fencing in place, unauthorized access is still possible. Without proper fencing, the garrison area cannot be considered secure.

This project is required to provide a cantonment area ACF to prevent unauthorized access to the installation garrison area, both North and South Forts, by pedestrians, vehicles, and trains on a long-term basis. This project, in conjunction with other phased access control projects would provide a secure and continuous, well-delineated and controlled cantonment area boundary. This project is in direct support of anti-terrorism/force protection (AT/FP). It has been coordinated with the Installation Physical Security Plan and all physical security measures and AT/FP are included. Alternative methods of meeting this requirement have been explored during project development.

1.3 Location

Fort Polk is located in west central Louisiana in Vernon Parish. The Main Post consists of 107,024 acres (including Army fee-owned land and USFS fee-owned land). The two largest neighboring communities are Leesville and DeRidder. Fort Polk is divided into two separate landmasses: the Fort Polk Military Reservation and the Peason Ridge Training Area. Peason Ridge is located approximately 15 miles north of the main post in Vernon Sabine and Natchitoches Parishes. The Peason Ridge area is not in need of a security fence because its small cantonment area is already fenced. This Proposed Action would occur at the Fort Polk Military Reservation, specifically the North and South Fort cantonment areas. (See Figure 1-1)

1.4 Scope of Environmental Analysis

This environmental assessment (EA) considers the direct, indirect and cumulative effects of the Proposed Action and alternatives, including the No Action Alternative. It was prepared in accordance with the National Environmental Policy Act of 1969 (NEPA) [42 U.S.C. 4321 et. Seq.], Council on Environmental Quality Regulations [40 CFR Parts 1500-1508], and "Effects of Army Actions" [32 CFR Part 651].

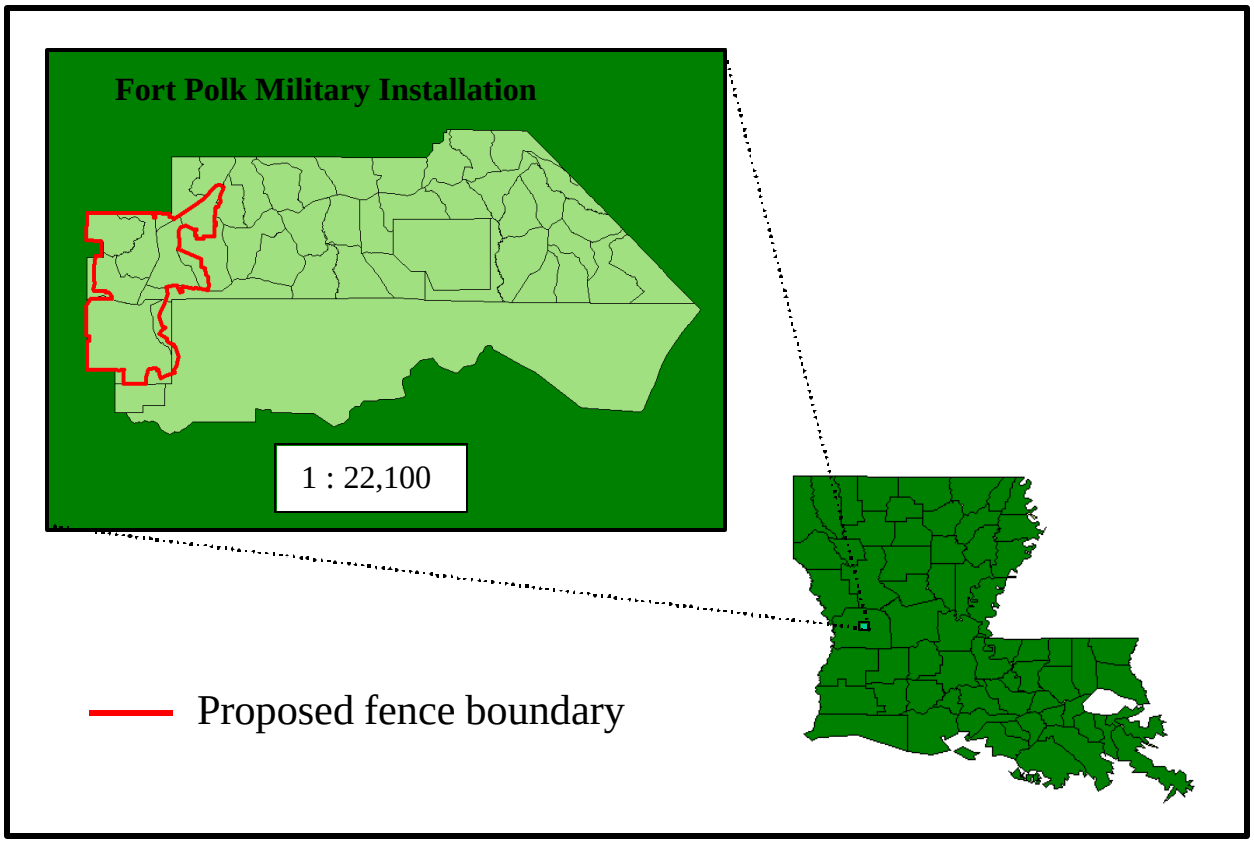

Figure 1-1 Project area, Fort Polk Military Installation, Vernon Parish, Louisiana

1.4.1 Scoping and Issues Analysis

NEPA defines scoping as "an early and open process for determining the scope of issues to be addressed and for identifying significant issues related to the Proposed Action" (40 CFR 1501.7). These issues are used to develop alternative actions, including mitigation measures and to evaluate the environmental consequences of proposed actions and alternatives. An interdisciplinary team met during October 2002 to discuss potential areas of concern regarding the proposed ACF development and to formulate alternatives. The following areas were identified as areas of potential concern:

- Land Use – Potential changes in established land use patterns, including changes in the nature or intensity of training use within the installation boundaries.
- Surface Water Quality - Potential for sedimentation of streams and wetlands, adverse effects on surface water quality.
- Cultural Resources – Potential effects to cultural resources eligible or potentially eligible for listing on the National Register of Historic Places.
- Natural Resources – Potential loss of vegetative cover due to grubbing and clearing of vegetation, and potential loss or damage to rare and sensitive plant species.
- Threatened/Endangered Species – Potential for adverse effects to the red-cockaded woodpecker (RCW) and its habitat as well as the Louisiana Pine Snake.
- Wetlands – Potential loss of wetlands due to construction of ACF.
- Biodiversity – Potential for adverse effects to sensitive species.
- Recreation – Effects on opportunities for outdoor recreational uses, especially hunting.
- Environmental Justice – The Proposed Action would occur within the boundaries of the existing Fort Polk cantonment areas and would have no effect on minority or low-income populations. The Proposed Action

poses no known risks to public health, nor would they result in a deterioration of socioeconomic conditions of neighboring communities.

1.4.2 **Issues Not Considered to be Potentially Significant**

The team also identified the following resources or issues that were eliminated from detailed analysis early in the scoping process because they were not of concern or were not relevant to the Proposed Action and alternatives. The team also identified the following environmental parameters determined to not be issues of concern.

- Air Quality – The Proposed Action would have no impact on the quality of air. The activities would not add to emissions or impact the permits at Fort Polk.
- Ground Water Quality – The Proposed Action would no impact the quality of ground water.
- Noise – The Proposed Action would not create disturbance to residents and communities neighboring Fort Polk.
- Asbestos – No asbestos containing materials would be utilized in completion of the Proposed Action.
- Lead-based Paint – No lead-based paint would be utilized in completion of the Proposed Action.
- Solid Waste – The Proposed Action would not impact solid waste at Fort Polk as no additional facilities would be created and there would be no increase in population as a result of the action.
- Hazardous Material/Waste – The Proposed Action would not impact hazardous material storage or waste disposal at Fort Polk.
- Toxic Substances – No toxic substances would be utilized in the development of the ROW or the construction of the ACF as part of this Proposed Action.
- Geology – The Proposed Action would have no effect on geologic resources. No proposed activities would result in seismic hazards, and no development of extraction of mineral resources or permanent alteration of local topography is proposed.
- Effects on Children – The Proposed Action would have no effects on children. The Proposed Action would not involve children or present public health or safety risks potentially affecting children.
- Real Property and Infrastructure – No new facilities, developments, populations increases or changes to existing real property or infrastructure are proposed; therefore no effects to real property and infrastructure are anticipated.
- Visual Quality – Because the designated use of Army-owned training lands at Fort Polk is military training, no visual quality standards, guidelines or objectives have been established. The Proposed Action would not significantly alter the existing visual quality of these lands or impair achievement of established Scenic Integrity Objective in nearby USFS land.

1.4.3 **Other Relevant NEPA Documents**

Several previous documents have analyzed the environmental effects of developing a structure to secure U.S. Army property at JRTC and Fort Polk. This section identifies other key NEPA documents that analyze environmental effects of other agency actions that are relevant to the environmental analysis of the current proposal (described in Section 2) because the listed NEPA documents are for actions with environmental effects similar to those expected from the current proposal and/or because a common resource base was affected. Also, the NEPA documents for the actions listed below are the relevant actions referred to in the cumulative effects assessments in Section 4 that analyze the cumulative or combined environmental impacts of the current proposal together with those of other past, present and reasonably foreseeable future agency actions.

- *Environmental Impact Statement for 2nd Armored Calvary Regiment Transformation and Installation Mission Support, Joint Readiness Training Center (JRTC) and Fort Polk. Louisiana and Long-Term Training Use of Kisatchie National Forest Land*, 2003. Multiple construction projects are proposed to complete the transformation of the Army. This document is currently in draft form.
- *Environmental Assessment for Peason Ridge Fencing Project,* 1992 - Construction of a barbed wire fence around the boundary of the Peason Ridge Training Area including a 12-foot-wide ROW to control unauthorized access (civilians and livestock) during training operations and to provide a definitive boundary for military personnel unfamiliar with area so that training is confined to appropriate areas.
- *Record of Environmental Consideration CY01258* – Installation of security lights at MP checkpoints.
- *Record of Environmental Consideration CY00256* – Construction of 6' Security Fence in the 8700 Block to secure Government Contractor equipment.

- *Record of Environmental Consideration CY02097* Access Control Point #4, Temporary Truck Turn Around Commercial Truck Inspection Point. Approximately 3.5 acres of land was cleared of timber and excavated. An embankment and stone base was established to provide a temporary truck inspection and turn around point on south Louisiana Ave.
- *Record of Environmental Consideration CY02098* Access Control Point #7, Temporary Truck Turn Around Commercial Truck Inspection Point. A gate, fence, guard booth and lighting were re-located and a turn around and inspection point was created on Ave K, north of the Alligator Lake staging area.
- *Record of Environmental Consideration CY02128* SQ-00008-2 Access Control Point #1, Louisiana Avenue Main Gate. The action resulted in only .38 acres of new disturbance through use of existing roadways, shoulders and unpaved pull-off areas.
- *Record of Environmental Consideration CY02130* Access Control Point #3, Mill Creek Road, SQ-00010-2 Construction of guard house and booths, enclosed vehicle inspection structures, protective canopy, construction of additional traffic/inspection areas/lanes, installation of protective gates, crash barriers, tire shredders and packaged sewage treatment system. No new disturbance would occur with this action.
- *Record of Environmental Consideration CY02131* Access Control Point #4, Louisiana Avenue South SQ-00011-2. Construction of access control point on Louisiana Avenue South to include guard house and booths, enclosed vehicle inspection structures, protective canopy, to pave traffic/inspection areas/lanes, install protective gates, crash barriers and under vehicle surveillance systems.
- *Record of Environmental Consideration CY02132* Access Control Point #5 at LA Highway 467 South. Construct access control point on LA Highway 467 South to include guard house and booths, protective canopy, construct additional traffic/inspection areas/lanes, install protective gates, crash barriers, tire shredders, and under vehicle surveillance systems. No new disturbance would occur with this action.
- *Record of Environmental Consideration CY02133* Access Control Point #6, Chaffee Road, SQ-00013-2. Construct access control point on Chaffee Road to include guard house and booths, protective canopy, construct additional traffic/inspection areas/lanes, provide parking, install protective gates, crash barriers, tire shredders and under vehicle surveillance.
- *Record of Environmental Consideration CY02135* SQ-00015-2 Access Control Point #8, Artillery Road. Construct access control point on Artillery Road to include guard house and booths, enclosed vehicle inspection structures, protective canopy, construct additional traffic/inspection areas/lanes, provide parking, install protective gates, crash barriers, tire shredders, under vehicle surveillance systems, and construct new connector road between Artillery Road and Mobile Street.
- *Record of Environmental Consideration CY02136* Access Control Point #9, Polk Army Airfield, SQ-00016-2. Construct Access Control Point truck inspection on Polk Army Airfield to include guardhouse and booths, protective canopy, construct additional traffic/inspection areas/lanes, provide parking, install protective gates, crash barriers, and under vehicle surveillance systems. Demolition of existing guardhouse.
- *Record of Environmental Consideration CY02138* Access Control Point #7, K Avenue, SQ-00014-2. Construct access control point on K Avenue to include guard house and booths, enclosed vehicle inspection structures, protective canopy, pave traffic/inspection areas/lanes, providing parking, install protective gates, crash barriers, tire shredders and under vehicle surveillance systems. New gas chambers would be built following the demolition of building 8556.
- *Record of Environmental Consideration CY03121* – Installation of security fence at Building 1830. Action includes preparation of ground surface for new fence line and installation of security fencing in accordance to new fence site plan.
- *Record of Environmental Consideration CY03122* – Installation of security fence at Building 7840. Action includes preparation of ground surface for new fence line and installation of security fencing in accordance to new fence site plan.
- *Record of Environmental Consideration CY03123* – Installation of security fence at Building 330. Action includes preparation of ground surface for new fence line and installation of security fencing in accordance to new fence site plan.
-

1.5 Framework for Decision Making

The decision to be made is whether to implement the Proposed Action, modify the Proposed Action or select an alternative action, including the No Action Alternative. The Provost Marshal Office, JRTC and Fort Polk would make this decision.

SECTION 2.0 - PROPOSED ACTION AND ALTERNATIVES

2.1 Proposed Action (Preferred Alternative)

This alternative provides the least disruption to military training. The proposed layout of the Preferred Alternative can be found in Figure 2 – 1. The purpose of the Proposed Action is to develop an ACF around the Fort Polk North and South Fort cantonment areas. Much of the ACF would be constructed in existing ROWs. The Installation Physical Security Plan of Fort Polk requires a 30 feet cleared area outside of the ACF and a 40 feet clearance inside the ACF. Additionally, no structure can be located within 20 feet of the outside edge of the ACF that might aid in climbing or clearing the ACF. This would include buildings as well as telephone and light poles. Structures within the ACF would be a minimum of 10 feet from the ACF. Therefore, the ROW must be a minimum of 70 feet wide. In already disturbed areas, the ROW may be a maximum of 100 feet wide. The entire 70 feet must be within installation property; to maintain the integrity of the cleared area, no part of the exterior 30 feet can be controlled by any one other than the Army. Three separate security components must be contained within the ROW: a seven feet high fence, an access road, and security lighting. A schematic of a section of the ACF is shown in Figure A-1.

The fence would consist of a 7 feet tall chain link fences topped with three strands of barbed wire.

In locations where roads would either need to be improved or developed, the road would consist of a 10 feet wide surface of dirt/gravel.

Lighting would consist of lights on poles with accompanying electrical power source within the ROW.

The road and fence would be placed atop an earthen dam over drains that do not have continuous flow. At these locations, a draw down structure would be placed under the earthen dam and an emergency spillway would be placed on one end of the earthen dam. The diagram in appendix A shows the basic design of these structures. Once placed, the earthen dams and associated draw down and spillway structures would serve as sediment basins at the location. At certain locations, an impoundment could be developed rather than a sediment pond to enhance outdoor recreational opportunities for the installation. Creek crossings would consist of the placement of grates on existing structures and development of sunken box culverts, or other designed structures that enable water to flow through the secured area. Grates could also be used in some locations. The structures would be placed in such a way as to not impede natural flow of the stream or cause a barrier to aquatic organism passage.

Figure 2-2 This existing gas pipeline ROW runs along the western edge of South Fort and the installation.

Figure 2-3 Existing ROW will be used for ACF construction in North Fort. (Looking west toward the Chaffee Access Control Point).

Following construction, any bare areas not permanently stabilized as road surface would be revegetated in accordance with the Storm Water Pollution Prevention Plan that would be established for the project. All ground disturbance activities over one acre require a water quality certification from the state prior to initiation of the project. See Water Quality Section 3.3.1 for more information.

Existing ROW would be utilized to the extent possible (see figures 2-3 and 2-3). There are areas where existing ROW is either not available, has restricted use (i.e., pipeline restrictions for construction immediately over the pipeline)

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or the existing ROW is not 70 feet wide. Additional disturbance could be as slight as increasing an existing ROW by 5 feet to as much as 30 feet. The total area for new disturbance is approximately 16.39 acres. New disturbance in this instance refers to areas that would be cleared and grubbed, not areas where stumpage and roots would remain in place.

The project would require tree and shrub removal to rehabilitate or establish the needed right-of-ways. In areas with existing ROW, brush hogging would be used to maintain the ROW. If tree removal were required, a tree sheer or hand saw (chain saw) would be used to remove the timber. The trees would be sheered or cut at ground level leaving the roots in place. Once established, the ROW would be mechanically maintained. Table 2-1 below, details acreage of new disturbance and tree shearing or timber harvest for all alternatives considered.

A COMPARISION OF TOTAL NEW DISTURBANCE AND TOTAL TREE SHEARING/HAVEST ACRAGE

ALTERNATIVE CONSIDERED	TOTAL ACRAGE OF "NEW" DISTURBANCE	TOTAL ACRAGE OF TREE SHEARING/HARVEST
PROPOSED ACTION	16.39	100.75
NO ACTION ALTERNATIVE	None	None
ALTERNATIVE 1	14.66	95.65
ALTERNATIVE 2	12.81	88.59

Table 2-1 Comparison of Acreage

2.2 No Action Alternative

If this project is not provided and no action is taken, the absence of adequate access control would continue to subject facilities and personnel in the garrison area to possible attack by extremist and/or terrorist groups. This project is in direct support of AT/FP. It has been coordinated with the installation physical security plan, all physical security and AT/FP measures. Alternative methods of meeting this requirement have been explored during project scoping. The project is the only feasible option to meet the requirement. Sustainable principles would be integrated into the design, development and construction of the project in accordance with Executive Order 13123 and other applicable laws and Executive Orders. No additional acres of new disturbance would occur and no trees would be sheared for harvest. (See Table 2-1)

2.3 Alternatives to the Proposed Action

ALTERNATIVE 1 – Under the first alternative the Army would fence western portions of Mill Creek Training Area. This alternative would disturb 14.66 acres of previously undisturbed ground and would provide straighter lines and include more existing ROWs. Table 2-1, above, details acreage of new disturbance and tree shearing or timber harvest for all alternatives considered.

This alternative encompassed all of Mill Creek Training Area 1 and 2 and the western portion of Area 3. Implementing this alternative would disrupt training in the contiguous training area in the eastern portion of Fort Polk. These training areas play a key role in training which is the primary mission of the JRTC and Fort Polk. Additionally, a number of RCW clusters were located along the eastern edge of this alternative. It would be necessary to fence around the clusters and no construction could occur during nesting seasons unless construction could be conducted beyond the recommended 200-foot buffer zone. All of these actions would cause the development of unnecessary ROWs. For these reasons, this alternative is not reasonable and therefore is not evaluated in detail in this document. The proposed route of this Alternative can be found in Figure 2 – 1.

ALTERNATIVE 2 – Under the second alternative, the ACF would bisect Castor Training Areas 4 and 5. This alternative would disturb 12.81 acres of previously undisturbed ground. Additionally, it would provide straighter

lines and require less timber removal. (See Table 2-1) This alternative would disrupt training in the contiguous training area in the northwestern portion of Fort Polk. This area plays a key role in training, which is the primary mission of the JRTC and Fort Polk. For this reason, this alternative is not reasonable and therefore is not evaluated in detail in this document. The proposed route of this Alternative can be found in Figure 2 – 1.

SECTION 3.0 - AFFECTED ENVIRONMENT

3.1 Introduction

This section discusses environmental areas of potential concern identified during the scoping process. The effects of the Proposed Action are discussed in Section 4.

3.2 Land Use

3.2.1 **Installation Land Use**

The primary land use for the installation is military training and associated support functions. The Main Post contains about 106,000 acres, including 66,000 acres of Army-owned land and 40,000 acres of USFS-owned and Army-permitted land in the Intensive Use Area (IUA). The Fort Polk Main Post consists of three general land use categories: the cantonment area (8,000 acres), training areas (92,000 acres), and impact areas (5,400 acres). The Proposed Action would take place primarily on Fort Polk Army owned land. The ACF would be located on approximately 11 acres and would enclose approximately 123 acres of USFS IUA. However this portion of the ACF would be contained entirely on existing ROW. The use of these lands within the cantonment area is not expected to change in the foreseeable future. The Proposed Action encompasses the Castor Training Area but the use of Castor would not be impacted. Including the Training Area within the ACF eliminated the need to construct an additional Access Control Point. The land providing existing ROW and ROW developed under this action would continue as ROW in the foreseeable future.

Some of the primary secondary land uses for the installation include wildlife management, specifically management of the Red-cockaded Woodpecker (RCW) and Louisiana Pine Snake, forest management and recreation.

3.3 Cultural Resources

Cultural resources are archeological deposits or historic buildings, objects or sites that have been made or associated with man's past activity. On federal properties, the significance of a cultural resource is based on its eligibility for the National Register of Historic Places (NRHP) as described in the National Historic Preservation Act of 1966. Archeological and historic resources at Fort Polk are managed and protected in accordance with the installation's cultural resource management plan (Anderson and Smith, 1997) and the Programmatic Agreement among the USFS; the US Army, Force Command, the Advisory Council on Historic Preservation and the Louisiana State Historic Preservation Officer.

The entire project footprint has been surveyed for cultural resources and no sites with a potential for historic significance were noted.

3.4 Water Resources

3.4.1 **Surface Water Quality**

3.4.1.1 **Applicable Standards**

The Louisiana Department of Environmental Quality defines surface water quality standards to protect designated uses of surface waters in Louisiana under Title 33, Part IX – Water Quality Regulations, Chapter 11 – Surface Water Quality Standards (LDEQ, 2002d). Water Quality Standards consist of three components: use designations, general and numeric water quality criteria necessary to protect those uses, and an antidegradation statement. The Water Quality Standards establish water quality goals for a specific water body. In addition they established quality-based treatment controls and strategies beyond the technology-based levels of treatment required by section 301(b) and 306 of the Clean Water Act (CWA).

303(d) Listing Section 303(d) of the CWA requires states to identify and develop a list of water bodies that are impaired where technology-based and other required controls have not provided attainment of water quality standards.

The Louisiana Scenic River Act of 1988 was enacted to preserve, reclaim and enhance the wilderness quality, scenic beauty and ecological regime of certain free-flowing streams or stream segments. The Act also established the method for designation of streams and rivers as part of the Scenic River Designation Louisiana's Natural and Scenic River System. The act regulates activities that have a direct, measurable effect on designated scenic waters, or that occur within a 100-foot riparian zone along the stream bank. Point source discharges to tributaries or activities may not cause a measurable adverse impact at the confluence with a designated scenic stream. There are no Natural and Scenic Rivers in the project footprint.

3.4.1.2 **Potential Pollutant Sources**

Pollutant sources are typically categorized as either point or nonpoint sources under CWA.

Point Sources – Point sources are defined as any discernable, confined, and discrete conveyance, including but not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, concentrated animal feeding operation, landfill leachate collection system, vessel, or other floating craft from which pollutants are or could be discharged. The National Pollutant Discharge Elimination (NPDES) Program, under the CWA sections 318, 402 and 405, require permits for the discharge of pollutants from point sources. There are several types of permits under the NPDES permit program: effluent from facilities, municipal wastewater treatment plants, storm water from construction sites, and municipal separate storm sewer systems.

Nonpoint Sources - Nonpoint sources represent contributions from diffuse, nonpermitted sources.

JRTC and Fort Polk meet Louisiana Department of Environmental Quality (LDEQ) requirements under the Storm Water Pollution Prevention Plan (SWPPP). This certification process requires notification to LDEQ no less than two days prior to initiation of action of any disturbance and construction impacting one or more acres of previously undisturbed land.

3.5 Biological Resources

3.5.1 **Vegetation**

About 63 percent of Fort Polk is forested and most of the remaining area is grassland. Federally listed "endangered species" of plants are protected from "take" situations under the Endangered Species Act of 1973 (P. L. 93-205,87 Stat. 884 (16 &. S.C. 1531 et. seq.)). Additionally, the Louisiana Department of Wildlife and Fisheries' (LDWF) Louisiana Natural Heritage Program provides a list of the rare plant species of Louisiana (1999). No Federally listed plants occur at Fort Polk. In the study "Wetland and Sensitive Plant Species Survey for the Proposed Fort Polk Military Installation's Security Fence", (Raven, February 2003) (See Appendix C), data was collected from 71 points along the proposed ACF route, ROW and pond areas surveyed for the presence of wetland or Threatened/Endangered Species (TES) plants. In sixteen plant samples collected, no endangered species was recorded. Seven species ranked from critically imperiled to vulnerable in Louisiana were documented. One area contains forest dominated by American beech (*Fagus gradifolia*), white oak (*Quercus alba*), loblolly pine (*Pinsu taeda*) and Southern magnolia (*Magnolia gradiflora*). Beech and Magnolia forest area ranked as vulnerable throughout their global distribution.

3.5.2 **Wildlife**

Fort Polk's wildlife species include most animals indigenous to the southwest Louisiana pinelands region. Many wildlife species historically occurring on Fort Polk and surrounding lands evolved in habitat conditions associated with periodic fire. The native vegetation and associated wildlife communities of the region are largely the product of disturbance due to historic wildfires. Terrains, soil conditions and topographic location influenced the frequency and intensity of wildfires. On a smaller scale, other natural disturbances such as windstorms also influence habitat conditions. Additional information concerning fish and wildlife at Fort Polk can be found in the Integrated Natural Resources Management Plan (JRTC and Fort Polk, 1998).

3.5.3 **Threatened and Endangered Species**

The endangered red-cockaded woodpecker (RCW; *Picoides borealis*) requires mature, open-canopy, frequently burned longleaf pine forests for nesting, roosting and foraging habitat. The RCW excavates nesting and roosting cavities in older, living pine trees of sufficient diameter and adequate heartwood to house the cavity chamber (Clark 1993). Sap produced at the excavation site serves to protect occupant birds and eggs from tree climbing snakes and discourages cavity usurpation from other avian species (Dennis 1971). Because the species is a habitat specialist, the regeneration or destruction of required habitat is closely tied to RCW population expansion or decline. The range-wide loss, degradation and fragmentation of RCW habitat, and a corresponding decline in RCW numbers, were the primary factors contributing to federal listing of the species in 1973.

The RCW is the only federally listed endangered species known to occur on the Installation. Fort Polk manages two separate sub-populations of RCWs on Army-owned lands. One unit is on the main post adjacent to the Vernon Unit, Calcasieu Ranger District, Kisatchie National Forest. The second unit is at Peason Ridge and is not addressed in this survey because it is not impacted by the proposed action. Pre-breeding roost checks to determine group size and cluster affiliation were conducted in February and March 2002 at all active cluster sites in the Vernon-Polk population. The 2002 pre-breeding roost data indicated that there were 47 active sites on the main post Army land, consisting of 40 groups. The pre-breeding roost data on the Vernon indicted 143 active sites, consisting of 126 groups.

The Vernon-Polk RCW population is a designated primary core recovery population, which means current and future habitat will support at least 400-500 active clusters and at least 350 breeding groups (USFWS 2003). It is also a donor population, which supports translocation efforts in Oklahoma, Arkansas, Texas, and Louisiana. As a recovery population, the Vernon-Polk RCW population is critical to meeting the long-term, range-wide recovery of the RCW. As a donor population, it is vital to maintaining and increasing the viability of smaller, isolated populations in the western range.

The Recovery Population Goal for the Vernon-Polk population is at least 481 active clusters and 350 potential breeding groups. The Installation Regional Recovery Goal (IRRG), which is the number of clusters needed to meet recovery objectives considering current and future habitat, has been established for all Army Installations harboring RCWs. The IRRG for Fort Polk, main post is 179 active clusters. Fort Polk must retain 35,800 acres of pine forest to maintain adequate habitat to meet the IRRG. Additionally, in order to meet the Recovery Population Goal, the USFS has a target of 302 active clusters on the Vernon Unit.

3.5.4 **Wetlands**

Wetlands are described in 33 CFR Part 328.3 as “areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions”. At Fort Polk these areas typically include bogs, hillside seeps and baygalls, and creek bottoms. The U.S. Army Corps of Engineers (USACE) is authorized under Section 404 of the Clean Water Act (33 U.S.C. 1344) to regulate the discharge of dredged and fill materials into all waters of the United States, including wetlands. An initial site visit to the area identified 55 potential wetlands. According to a recent survey (Raven, 2003) of these potential wetland areas within the proposed ACF route, 67% of the sites examine exhibited wetland criteria. This survey did not measure or further delineate the potential sites. Two of the sites were highly disturbed due to disturbances from human activities or natural events.

3.6 Socioeconomic

Hunting is the primary natural resource based recreational activity at Fort Polk. Fort Polk is operated as a Wildlife Management Area (WMA) under a cooperative agreement between the Army, USFS and the Louisiana Department of Wildlife and Fisheries (LDWF). Although deer hunting comprises the majority of hunting trips, hunting opportunities also include quail, dove, woodcock, squirrel, feral hogs and turkey. Annual hunting seasons for the Fort Polk WMA are established by LDWF. Within state hunting seasons, portions of the WMAs are closed by the Army to accommodate training exercises. Areas that are open for hunting are posted daily at hunter check stations around the area as well as being posted on an informational web site and announced on a toll-free information line.

AR 420-74 and JRTC and FP Regulations govern hunting at Fort Polk. In addition to holding a valid state license, hunters are required to obtain an installation permit and to check in and out daily for safety reasons.

Bow hunting of deer and use of shotguns to hunt small game continues to be allowed within the footprint of the Proposed Action. As described above, areas open for hunting are posted daily and hunters are to check in and out daily for safety reasons. Civilian access to the installation has become more restricted which could also restrict access from hunting in the area.

Fort Polk attempts to maximize the area available for hunting while meeting training requirements and protecting the safety of both soldiers and civilians. Training activities are scheduled to minimize effects on hunting during opening weekends and for special hunts.

3.7 Environmental Justice

On 11 February 1994, President Clinton issued Executive Order 12898, *Federal Actions to Address Environmental Justice in Minority and Low Income Populations*. The purpose of this executive order is to avoid the disproportionate placement of adverse environmental, economic, social, or health impact from federal actions and policies on minority and low-income populations or communities. The 2000 Census indicates approximately 32 percent of the population in the area was minorities. 24 percent was Black/African American; all other racial groups combined totaled 8 percent including 4 percent Hispanic. This compares to the Louisiana population of 63.9 percent white, 32.5 Black/African American and 3.6 percent other minorities. For the United States, 75.1 percent of the populations were white, 12.3 percent was Black/African American, 12.5 percent was Hispanic and 12.5 percent was of other minority racial groups. The exact diversity of the population within the Cantonment (both those residing on-post and those working on-site) cannot be determined with finality as deployments, training activities and employment levels (especially through the presence of contractors) vary almost daily.

2000 Census data also defines the poverty level as $8,794 or less annual income for an individual and an annual income of $17,603 or less for a family of four. Approximately 20 percent of the residents in the area meet guidelines (with threshold variables ranging from income, family size, number of family members under age 18 and over 65, etc.) This is the same rate for Louisiana but is 8 percent higher than poverty rate for the United States.

3.8 Effects on Children

Executive Order No. 13045 *Protection of Children from Environmental Health Risks and Safety Risks* was issued on 21 April 1997. This Executive Order directs each Federal agency to "ensure that its policies, programs, activities and standards address disproportionate risks to children that result from environmental health or safety risks." Children are present in the housing areas of the North and South Fort Polk Cantonment area. They are also present as visitors (as in users of recreational facilities). The number and ages of children vary based on deployments and the status of the individual soldiers assigned to Fort Polk (married, with children, young children or grown or college age children). The Army takes precautions for their safety by a number of means, including the use of fencing, limitations on access to certain areas and provision of adult supervision.

3.9 Biodiversity

Identified as a potential environmental concern during scoping, further review determined that the ACF construction and ROW would not change the overall diversity of plant, mammals, insect, bird, aquatic, rodent, amphibian, reptile species occurring within the terrestrial and aquatic habitats of the project footprint.

SECTION 4.0 – ENVIRONMENTAL CONSEQUENCES AND CONCLUSIONS

4.1 Introduction

This section presents the environmental and socioeconomic consequences of implementing the Proposed Action and alternatives described in Section 2. To ensure consistent and defensible evaluation of effects in the EA, thresholds of concern were developed for each resource. A Fort Polk interdisciplinary team including NEPA specialists and subject matter experts developed the thresholds. Although some thresholds have been so designated based on legal or regulatory limits or requirements, others reflect discretionary judgment and best management practices on the part of the Army in accomplishing their primary mission of military readiness and environmental stewardship responsibilities.

"Significant" would be used to indicate the relative degree of severity of a predicted effect. A measure, in terms of the degree of severity of the environmental effect of an action reflecting the context and intensity of the effect, as defined in CEQ Regulations (40 CFR 1508.27).

THRESHOLDS OF CONCERN [A]

Area of Concern	Spatial Boundary	Threshold of Concern: Proposed Action could cause or result in:[B]
Land Use: Installation Land Use	Installation boundary,	If the Proposed Action could change the primary land use.
Cultural Resources	Installation boundary	If the Proposed Action could cause violations of federal, state or installation regulations concerning significant sites. Disturbance of designated sites.
Water Resources	Installation boundary	If the Proposed Action could cause violations of Storm Water Protection Plan, federal, state or local law.
Biological Resources: Wildlife	Installation boundary,	If the Proposed Action could cause the inability of the installation to achieve management objectives for federally managed lands due to reduced habitat.
Biological Resources Vegetation	Landscape Scale	If the Proposed Action could cause the permanent loss of degradation of designated rare/sensitive plant sites.
Biological Resources: Threatened or Endangered Species	Home range or protected habitat	If the Proposed Action could cause a Jeopardy Opinion from the USFS. Direct mortality or other unpermitted "take" of threatened and endangered species
Biological Resources Wetlands	Installation boundary	If the Proposed Action could cause violations of Section 404 of the Clean Water Act (unpermitted deposition of dredged or fill material into wetlands or other "waters of the US")
Socioeconomic Recreation	Wildlife Management Areas	If the Proposed Action could cause the inability to hunt or provide continued recreational hunting opportunities.
Environmental Justice	Region of Impact (Vernon and Beauregard Parish)	If the Proposed Action could significantly impact the environmental and human health of minority or low-income populations.
Effects on Children	Installation boundary	If the Proposed Action could significantly impact the environmental health or safety to children.
General Compliance	Installation boundary or limits of affected environmental media	If the Proposed Action could cause violations of federal or state environmental rules, regulations, or permits held by the installation

Note:

A. Although some thresholds have been so designated based on legal or regulatory limits or requirements, others reflect discretionary judgment and best management practices on the part of the Army and Forest Service in accomplishing their primary missions of military readiness and management of National Forest lands (including multiple use and access), respectively, while also fulfilling their conservation stewardship responsibilities. Quantitative/qualitative analyses may be used, if appropriate, in determining whether, and the extent to which, a threshold is exceeded.

B. Thresholds listed are for potential effects of the Proposed Action prior to or without mitigation.

Table 4-1 Threshold of Concern

4.2 Land Use

4.2.1 **Installation Land Use**

NO ACTION ALTERNATIVE – If this project is not provided, the absence of adequate access control would continue to subject facilities and personnel in the garrison area to possible attack by extremist and/or terrorist groups. Installation land use would not be changed. If the fence is not provided, land use would not change.

PROPOSED ACTION – The preferred alternative does not change the primary land use at the installation. The use of lands within the cantonment area is not expected to change in the foreseeable future. The use of Castor Training Area would not be impacted. The land providing existing ROWs and ROWs developed under this action would continue as ROW in the foreseeable future.

4.2.2 **Cumulative Effect**

Few past actions have negatively impacted the primary land use of the installation. In the last five years, the only action that resulted in a change to the primary land use was the transfer of 204 acres of land to the State Veterans Administration for use as a cemetery. The land was across a main state highway and therefore had historically been underutilized. No identified past Army actions (see Section 1.4.3) and no current Army actions have changed off-post primary land use patterns. The primary use of Army-owned lands remains training and support of training. Therefore, environmental effects from past and current Army actions, when added to the anticipated environmental effects of the proposed action, do not result in any significant impact to land use. In a like manner, none of the past or current Army actions, and none of the reasonably foreseeable Army actions would change on-post or off-post land use. Therefore, there is no cumulative impact from the combined environmental effects of the proposal and those of past, present and reasonable foreseeable future actions, which include: Digital Multi-Purpose Battle Area Course (DMPBAC) at Peason Ridge and various actions being analyzed in the ongoing Environmental Impact Statement. [See Environmental Impact Statement for Second ACR Transformation and Installation Mission Support, Joint Readiness Training Center and Fort Polk, Louisiana and Long-Term Military Training Use of Kisatchie National Forest Lands, 2003 (Transformation EIS)].

4.3 Cultural Resources

Effects to Cultural Resources would be considered significant if the Proposed Action would result in a violation of laws and regulations pertaining to significant the disturb or alter cultural resource or historical sites or potentially significant sites.

NO ACTION ALTERNATIVE – No effects to cultural or historically significant sites are expected under the No Action Alternative.

PROPOSED ACTION – Based on a survey of Fort Polk lands, there are no known occurrences of cultural or historically significant sites are located within the footprint of this Proposed Action. Prior to the start of the project, workers would be instructed on recognizing and avoiding cultural resources. If an artifact were discovered, all activities would be stopped. A buffer zone would be added to newly identified site boundaries for the protected sites. For these reasons, there are no anticipated impacts to Cultural Resources.

4.3.1 **Cumulative Effect**

No current Army actions, no past Army action (see Section 1.4.3) and no reasonably foreseeable future Army actions (see Transformation EIS noted in Section 1.4.3 and the DMPBAC EA referred to in Section 4.2.2 above) would individually or collectively together with the proposal impact Cultural Resources. Additionally, the installation would continue in the future to follow existing procedures for managing cultural resources to avoid or minimize any environmental effects to cultural resources from Army actions. Therefore, there is no cumulative or combined effect to cultural resources from adding environmental effects of the proposal to those of such other past, present and reasonably foreseeable future actions.

4.4 Water Resources

4.4.1 **Surface Water Quality**

Effects to surface water quality would be considered significant if the Proposed Action would cause a violation of the state water quality criteria for listed stream reaches and their tributaries or cause of violation of Federal or State discharge permits.

NO ACTION ALTERNATIVE - No effects to existing water quality are expected under the No Action Alternative.

PREFERRED ALTERNATIVE – Potential impacts to surface water quality could occur during construction activities. The greatest potential effect to surface water resources under the Preferred Alternative would be from the introduction of sediments and organic material into streams due to ground disturbance. Short-term introduction of small amounts of sediment would be expected to occur during precipitation events, but would be rendered insignificant with the emplacement of site-specific erosion control measures. Silt fencing, slope diversions, sediment basins and impoundments would be constructed to minimize movement of sediment into stream systems. Denuded areas would be revegetated to prevent long-term soil movement as well. Silt fencing, slope diversions, and re-vegetation would be implemented on a site-specific basis during construction activities. Sediment basins would be installed at the end of earthen dams placed over drains that do not have continuous flows. In certain locations, an impoundment could be developed rather than a sediment pond to enhance outdoor recreation opportunities for the installation. A diagram of a typical sediment basin can be found in Appendix A 'Construction Details'. JRTC and Fort Polk would comply with requirements to develop and comply with a site specific Storm Water Pollution Prevention Plan (SWPPP) and to provide notification of intent to LDEQ within two days prior to initiation of action of any disturbance and construction impacting one or more acres of previously undisturbed land.

A majority of the streams found in the project area are intermittent, having seasonal flow during periods of extended precipitation only. Bayou Zourie, Drake's Creek headwater, Whiskey Chitto headwater and Hogpen branch are considered to have perennial flows. Affected stream segments are not contained in the Natural and Scenic Rivers Act of 1988, and therefore do not require special permitting for adjacent construction activities under the Louisiana Revised Statue 56:1840. Perennial streams in the project area are characterized as primarily first and second order with meandering activity to slightly cut banks with moderate bank vegetation stability, hardwood/pine/shrub over story, and a bank composition of fine sand and silt. Bottom substrates consist primarily of sand and silt, woody debris and small areas of gravel and clay. These systems contain a high degree of natural flux, and display dynamic change due to the instability of their bottom substrates. Stream gradients are extremely low during intensive precipitations events. ACF sections to be constructed over perennial streams would be placed on existing road crossings where possible. Physical crossings would be emplaced in accordance with Installation Physical Security Plan and constructed in a manner that minimally affects hydrologic flow and fish passage while ensuring that the integrity of the structure is maintained. All crossing structures would be placed below the natural stream grade in order to minimize hydrologic changes and to better maintain natural bottom substrates. Effects to stream biota would be considered insignificant.

4.4.2 **Cumulative Effect**

Short-term minor impacts to sedimentation and turbidity could occur during the construction phase of this project. As stated above, due to the SWPPP and the proposed maintenance of the ROWs, the impacts from the Proposed Action are minor and of short duration. A prolonged introduction of sedimentation and turbidity into any given stream is not anticipated. However, these impacts when combined with the environmental effects from past Army actions (see Section 1.4.3), current Army actions (see Section 1.4.3 and DMPBAC EA and the Transformation EIS referred to in Sections 4.2.2 and 4.1.1 above), and reasonable anticipated future Army actions (see those noted in Sections 1.4.3, 4.2.2 and 4.3.1) when combined with the proposed action would not collectively have a significant cumulative impact on surface water quality. Good soil management and soil stabilization practices currently and historically applied, and that will continue to be applied in the future, largely prevent any combination of cumulative impacts to the water quality environment.

There are numerous past activities in the cantonment area (see Section 1.4.3) that could have introduced sediments into the streams exiting the footprint of the Proposed Action. These past activities include any type of construction that has occurred since the installation was established. However, environmental consequences of these actions cannot readily be incrementally added to those of the Proposed Action to cause a significant impact for two reasons.

SEGMENT	5A	7A	12A	12B	17A	17B	17C	17D	17E	17F	17G	24A	24B	24C	25A	35A	38A	39A	TOTAL ACREAGE
PROPOSED ACTION																			**PROPOSED ACTION**
Pond	0.9		6.1	2.4	1.3	1.6	9.3	4.3	1.2	1.2	5.5	2.7	2.8	0.4	7.15	2.3	1.6	0.7	**51.45**
Sediment Basin		0.1		0.1	0.4														**0.6**
ALTNERATIVE 1																			**ALTERNATIVE 1**
Pond	0.9		6.1	2.4	1.3	1.6	9.3	4.3	1.2	1.2	5.5					2.3	1.6	0.7	**37.50**
Sediment Basin		0.1		0.1	0.4														**0.6**
ALTERNATIVE 2																			**ALTERNATIVE 2**
Pond	0.9				1.3	1.6	9.3	4.3	1.2	1.2	5.5	2.7	2.8	0.4	7.15	2.3	1.6	0.7	**42.04**
Sediment Basin		0.1		0.1	0.4														**0.6**

Table 4-2 Size of Proposed Sediment Basins and Ponds

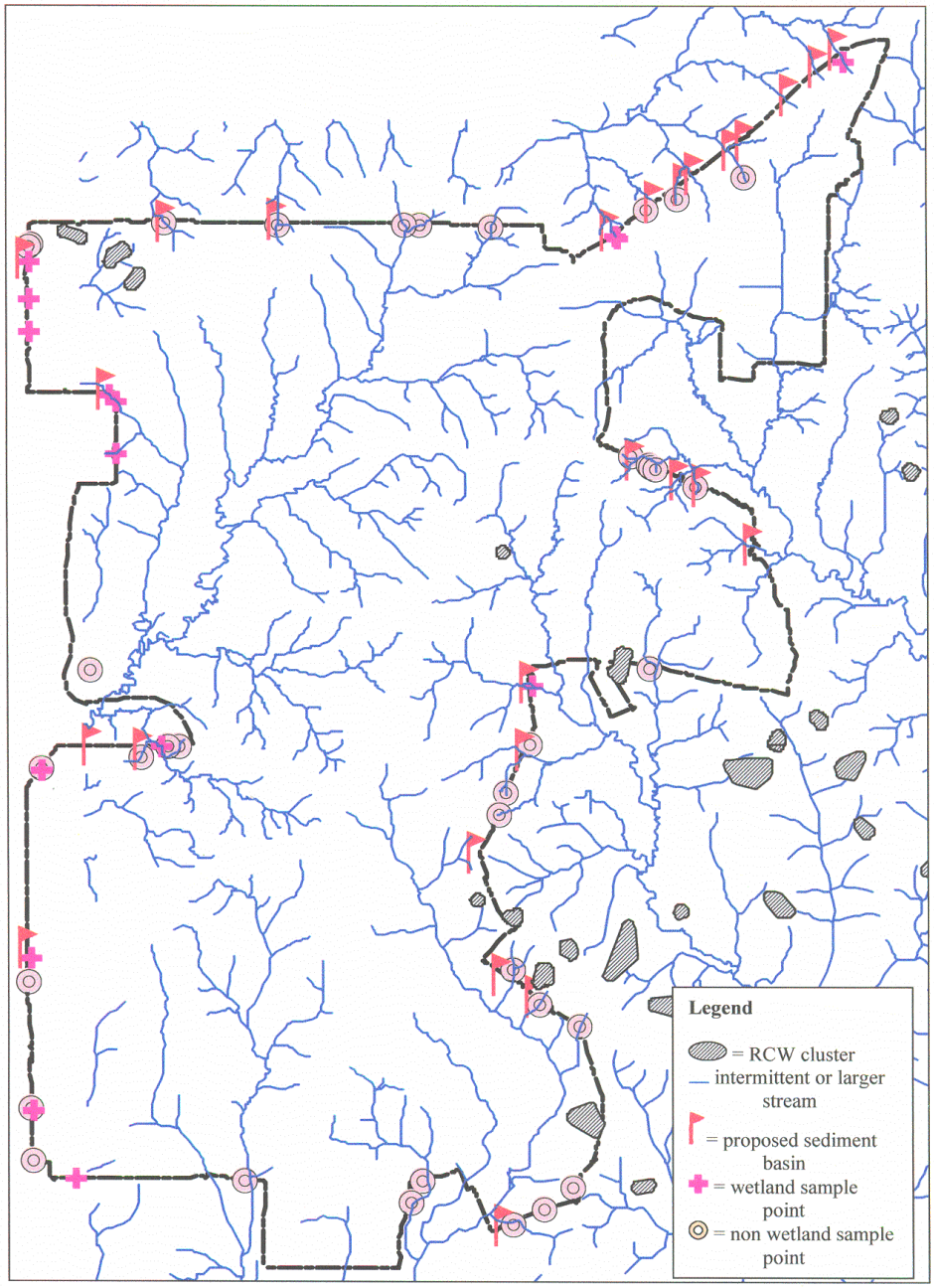

Figure 4. 1 – Sensitive Areas: Locations of wetlands sampling points, proposed sediment basins and retention ponds, and RCW clusters

First, these soil disturbances associated with these activities have historically been stabilized either through paving or otherwise improving the site through reestablishment of vegetative cover. present and future actions within the project footprint that could cause sedimentation to be introduced into local drainages include transformation projects, all of which are being analyzed in the Transformation EIS (See Section 1.4.3) as well as those addressed in that Section and maintenance projects throughout the cantonment. Due to installation compliance with the recent CWA changes that require implementation of a SWPPP plan for all ground disturbances over one acre, it is not anticipated that these present and foreseeable future actions would contribute large amounts of sediments to receiving streams.

Finally, the project would result in the placement of sediment basins or retention ponds on the majority of the drains that do not have continuous water flows surrounding both North and South Fort cantonment areas. Therefore sedimentation from present and foreseeable future actions should actually be further reduced. Table 4.2 indicates maximum size and number of proposed sediment basins and/or retention ponds.
For all the above reasons, the environmental effects of the Proposed Action would still not when cumulatively combined with those of other past, present and reasonably foreseeable Army actions, would not have a significant cumulative effect on surface water quality. Furthermore, the project does not pose any threat of negatively impacting any other water quality criteria because no introduction of chemicals or metals that could contribute to degradation of these criteria is proposed.

4.5 Biological Resources

4.5.1 **Vegetation**

Effects to vegetation would be considered significant if landscape scale changes were made to plant communities and sensitive plant species.

NO ACTION ALTERNATIVE – Minor impacts to plant communities and sensitive plant species could occur as a result of routine military training, routine traffic, and other routine activities. Under the No Action Alternative, traffic, military training and routine activities would continue. Due to Fort Polk management of training areas, these periodic vegetation disturbances are not significant.

PREFERRED ALTERNATIVE – The Proposed Action would not result in landscape scale changes to plant communities because the disturbance is a long, linear disturbance. Although some individual plants considered sensitive may be taken, this alternative would not adversely effect the regional population (Raven, 2003). Some sensitive species would be adversely impacted with extensive ROW activities such as alteration and reseeding with non-native vegetation. However, this alternative requires new disturbance for creation or improvement to ROWs for the ACF on approximately 1.5% of the cantonment area and will harvest timber from9.5% of the cantonment area. The regional population should not be adversely effected. Sensitive plant areas would be considered before development of any impoundment ponds or sediment basins. The Proposed Action is not large enough in scope to have landscape scale impact.

4.5.1.2 **Cumulative Effects**

Vegetation would be impacted within the existing ROWs. Other actions within the existing cantonment area (including multiple proposed construction activities addressed in the Transformation EIS) are proposed. The majority of these projects occur on previously disturbed areas. Minor adverse and beneficial cumulative effects on vegetation would be expected from activities occurring on Army and Forest Service lands in the region of the JRTC and Fort Polk. Construction of the ACF would entail clear-cutting 100.75 acres of forests, primarily consisting of pine and mixed pine-hardwood vegetation. Together with activities under the proposed action, ongoing construction and proposed actions under the Army Transformation activities, less than 1,500 acres of forest would be cleared on the JRTC and Fort Polk and Forest Service land. These are being staggered over many years; this would lessen cumulative impacts. Given the scale of these projects, the sum of concurrent timber management operations in the region by both public and private entities could lead to a short-term adverse effect as a reduction in the amount of dense forest cover in the region and a long-term beneficial effect as an increase in the amount of open-canopy pine forest and grassland vegetation. These environmental projects, when combined with the proposed project, would still not create a landscape level change to vegetation. Private sector developments and silviculture projects have

historically altered vegetative communities surrounding the west portion of the installation. Any changes to these areas would not be cumulatively added to changes caused by the project because they would be altering already compromised vegetative ecosystem. Accordingly, there would be no cumulative or combined environmental effects on vegetation from the environmental effects of the proposed action when taken together with those of such other projects.

4.5.2 **Wildlife**

Effects to wildlife would be considered significant if the action resulted in a permanent net loss of wildlife habitat.

NO ACTION ALTERNATIVE – A majority of wildlife species inhabiting Fort Polk has adapted to ongoing military activities and their behavior would not be adversely affected. Existing environmental and natural resource management plans, training regulations and standard operating procedures to minimize environmental degradation would continue to afford sufficient protection for wildlife and aquatic specie under the No Action Alternative.

PREFERRED ALTERNATIVE – Throughout the entire parameter of the ACF, approximately 100.75 acres of habitat would be cleared to create or widen ROWs. Of the 100.75 acres, only 16.39 acres would be grubbed to facilitate road construction. Clearing would include brush hogging or manually removing woody vegetation. In addition to constructing the ACF, numerous recreational fishing ponds and sediment basins would be created along the proposed ACF route.

Although some forested areas, as mentioned above, would be permanently cleared, they should not be of significant size to affect wildlife. Additionally, a small per centage of the installation is currently open habitat. Some species of wildlife would benefit from the increase in open areas, although again not in significant numbers. Creation and expansion of ROW would create edge-habitat for those species that benefit from such transitional habitat.

4.5.2.1 **Cumulative Effects**

Total landscape biodiversity levels would not be significantly affected by the combined environmental effects from construction of the fenced perimeter and those of other past, present and reasonably foreseeable future Army actions (see Section 1.4.3, 4.2.2, 4.3.1 and 4.4.2). Edge associated Avian groups would be expected to benefit slightly from cleared ROWs and would have no overall effect to migratory populations. Small mammal populations exhibit limited home range sizes and would not be impacted through containment. Due to their limited physical size, incidental migrations would likely occur, ensuring long-term genetic viability. Total disturbed wetland acreages are not of sufficient size to cause a large-scale shift in amphibian population numbers, and would likely be offset to some degree through the construction of permanent impoundments and sediment basins. Landscape level population effects for large mammals would be limited to the containment of animals with the ACF perimeter and the restriction of emigration from this area. Impounded populations would be monitored and controlled through appropriate management techniques. Off site adjacent populations would exhibit short-term shifts due to the inhibition of free movement out of the fenced area. This shift would be short term due to the repopulation potential from unrestricted populations. Overall diversity and abundance effects would not lead to permanent loss or substantial degradation of wildlife populations on a landscape scale when combining this action with other past, ongoing or foreseeable Army actions.

4.5.3 **Threatened and Endangered Species**

Significant effects to the RCW population could be incurred if actions related to this project result in any of the following:

- Effects to individuals – actions resulting in reduced reproductive success, direct mortality or unauthorized take of any red-cockaded woodpeckers.

- Effects to cluster resources – actions resulting in the loss of cavity trees or potential cavity trees; a reduction in recovery-standard forage area to below 120 acres in sites of high productivity (site index $\geq$ 60) and 200-300 acres in sites of low productivity (site index < 60)(FWS 2003); or the genetic isolation of clusters.

- Effects to habitat - actions that reduce the pine forests to an extent that accomplishment of the Installation Regional Recovery Goal is precluded; actions that result in fragmentation of current and future RCW habitat.

NO ACTION ALTERNATIVE – The RCW or its habitat would not be affected under the No Action Alternative. There would be no change in baseline conditions for the RCW or its habitat.

PREFERRED ALTERNATIVE – There is one active USFS RCW cluster, 260-5, located within the construction footprint. The cluster is located along an existing ROW that will be utilized in the ACF project. The nearest active cavity tree is located 110 feet from the ROW. The RCW typically forages throughout its territory during the day, returning to the site just prior to sunset for roosting. Limiting construction activities to starting no earlier than 30 minutes after sunrise to concluding no later than 30 minutes before sunset will minimize disturbance to the RCW. In addition, construction activities within the cluster site would be prohibited during the breeding season, March 1 - July 31. Consequently, no behavioral disturbances or physiological stress to individuals that would result in mortality or reduced reproductive success is anticipated.

No additional clearing of trees or widening of the ROW would occur within the 1/2-mile foraging radius of cluster 260-5; therefore, no effect to foraging is anticipated. All of the 260-5 cavity trees are located west of the ROW, so the cluster would not be bisected by installation of the fence.

Two active RCW cluster sites, 5A and 59A, are located within 1/2 mile of the project area. An inactive cluster, 59C, is also located within 1/2 mile of the project area. Foraging for these clusters would be reduced to some extent (see Table B-1 in appendix) as a result of construction activities. Foraging analyses were conducted for the two affected active cluster sites. Results indicate that both sites have sufficient foraging and that clearing associated with the proposed action would not reduce or fragment available forage below FWS recommended standards (Henry 1989, FWS 2003). Figure 4 - 2 indicates available ROW on USFS land.

The construction of the ACF and associated ROWs will result in removal of approximately 66 acres of pine habitat from the installation forest inventory. The reduction of pine forest, however, does not affect long-term achievement of the Installation Regional Recovery Goal or result in fragmentation of current or future RCW habitat.

Figure 4-2 ROW in IUA USFS land near RCW clusters.

As stated in Table 4-1, impacts to Endangered Species would be significant if a U.S. Fish and Wildlife Service (USFWS) Jeopardy Opinion or Direct Mortality or other unpermitted "take" of threatened and endangered species resulted from the Proposed Action. It cannot be anticipated that either a direct morality "take" of a threatened or endangered species or a jeopardy opinion from the USFWS would occur as a result of the Proposed Action. Therefore, the Proposed Action will not have a significant effect on the RCW.

4.5.3.1 **Cumulative Effects**

Past Army actions (see Section 1.4.3), including designation of impact areas and construction of ranges, drop zones, and firing points have permanently removed 13,478 acres from the installation forest inventory since the establishment of Fort Polk in 1941. The Draft *Fort Polk Endangered Species Management Plan for the Red-cockaded Woodpecker* (ESMP; Fort Polk 2003) captures past actions that have removed habitat from the forest inventory and establishes a baseline of managed pine forest habitat required for achievement of the Installation Regional Recovery Goal. The ESMP identifies 44,448 acres of current or potential pine habitat within the Fort Polk

Habitat Management Unit (HMU), of which 35,800 acres are required to meet recovery objectives. (See Table B-2 in appendix B) The ESMP serves as the baseline for tracking cumulative effects from removal of habitat.

Foreseeable future Army actions that could potentially impact the RCW on the installation are contained in the Transformation EIS (See Section 1.4.3) currently being prepared for Fort Polk. Approximately 823 acres of pine habitat would be removed from the forest inventory as a result of proposed transformation construction projects. The 66 acres of timber removal from Proposed Action when added to the proposed Transformation projects will cumulatively result in removing 889 acres of habitat from the installation forest inventory, reducing the HMU from 44,148 acres to 43,259 acres. This acreage is still adequate for achieving recovery objectives identified in the ESMP. Therefore, it is concluded that no significant impacts to the RCW will occur as a result of cumulatively adding environmental consequences of this Proposed Action to those of past, present or foreseeable future Army actions. (See Section 1.4.3, 4.2.2, 4.3.1, and 4.4.2).

4.5.4 **Wetlands**

Effects on wetlands would be considered significant if there was a violation of Section 404 of the Clean Water Act.

NO ACTION ALTERNATIVE – The baseline conditions for wetlands would not be altered if no actions were taken. As mentioned in Section 2, the majority of the proposed ACF and associated improvements follow existing ROWs and other disturbances. Under the no action alternative, these disturbances would continue to exist even where they transverse wetlands. Additionally, no sediment basins or retention ponds would be established. The wetlands that would be associated with these basins and ponds would therefore not be created.

PREFERRED ALTERNATIVE – Under this action, the Army would avoid disturbance of designated wetlands along the ACF route to the extent possible. None of the sites indicated in a recent survey (Raven, 2003) as potential wetland sites have been delineated; delineation would be performed in accordance to USACE guidelines and appropriate permits under Section 404 of the Clean Water Act (33 U.S.C. 1344) prior to construction of the ACF. Sediment basins and ponds would be established at drain crossings and creek crossings would be protected with grates to ensure natural water run-off remains unchanged.

Figure 2.1 shows the locations where the proposed footprint of the ACF and road would transverse wetlands or waters of the US. As can be seen in the figure, the impacts to wetlands occur almost exclusively at locations where the proposed ACF intersects drainages. Raven Environmental conducted a survey of the proposed footprint in 2002. During the survey, they determined locations where wetlands were potentially present. All of these identified wetlands areas would be permitted, thought the Corps of Engineers (USACE) prior to any proposed construction occurring within wetlands. At each location, USACE, as the regulatory agency, would determine the applicability of mitigation. The project proponent would complete all required mitigation before a permit is issued therefore any mitigation deemed appropriate by the regulatory agency would be completed prior to placement of fill in any wetland.

Although wetlands would be impacted at locations where the ACF crosses smaller order drainages, some wetlands would be developed around the edges of the sediment basins and retention ponds. Additionally, these structures would protect downstream wetlands. Figure A-2 illustrates the protective barrier that would be installed on many of the headwater exiting the current cantonment areas. It is important to emphasize that neither sediment basins nor retention ponds would be constructed on perennial streams. Using a conservative estimate of an average of $1/20^{th}$ of an acre of developed wetlands at each sediment basin or impoundment, a total of 1 acre of wetlands would be created. Just as with disturbed acres this amount can only be estimated at this time. The determination of proper types and amounts of mitigation necessary to offset these lost wetlands would be determined by the USACE during the 404 permitting process.

As shown in Table 4.1, impacts would be significant if the Proposed Action caused a violation of Section 404 of the Clean Water Act (unpermitted deposition of dredged or fill material into wetlands or other "water of the US"). The Army does not propose to fill wetlands or water of the US without the issuance of a permit for these fills and the Army fulfilling any mitigation deemed appropriated by the issuing agency, USACE. Therefore the Proposed Action would not significantly impact wetlands and water of the US.

4.5.4.1 **Cumulative Effects**

There are several other currently proposed projects that would require permitting under Section 404 of the Clean Water Act because they would result in fill materials being placed in water of the US and wetlands. All of the known projects are included in the Transformation EIS (See Section 1.4.3). However, just as with the Proposed Action, due to the installations' intent to comply with Section 404, no violation would occur. Therefore, no significant impacts from cumulatively adding the proposed project to these future projects are anticipated. Just as with this project, the installation would rely on the USACE to determine what mitigation is necessary to offset the function of these wetlands that would be lost.

4.6 Socioeconomic

Impacts to hunting would be considered significant if the Proposed Action resulted in the inability of citizens to hunt or a substantial decrease in recreational hunting opportunities.

NO ACTION ALTERNATIVE – There would be no effect on hunting or other recreational opportunities at Fort Polk under the No Action Alternative. Hunting would continue to be allowed within the cantonment and Castor Training Areas in accordance with Army, installation and state regulations. Areas scheduled for training would be closed to hunting and hunters should continue to check daily with web sites, information lines or schedules posted at check stations before hunting on Fort Polk lands. Hunters should continue to check in and out daily and to respect gun restrictions in the cantonment area.

PREFERRED ALTERNATIVE –Implementation of the Proposed Action would result in the complete confinement of the deer populations found within the cantonment and Castor Training Areas. This would lead to a higher harvest within the fenced area but can result in reduced harvest numbers in adjacent areas due to the lack of emigration from the contained population. This effect would be considered short term due to the immigration potential from unrestricted populations. Containing the population would contribute to a rapid increase in the population of white-tailed deer over a ten year period after the construction of the ACF around the cantonment area. As indicated in the Table 4-3, if the original population is estimated at 300 individuals with a growth rate of 30% (birth rate of 1.5 young per female with a 1:1 sex ratio and a 40% conception rate), and a natural mortality rate of 10%, it is realistic to have a population of approximately 19,778 deer within the fenced area after ten years although a population crash would probably occur prior to reaching this number. With such density, the possibility of diseases such as Chronic Wasting Disease, Blue Tongue and other diseases prevalent in white-tailed deer would increase. The incidences of vehicle/deer collisions would increase and demand for forage could result in deer destroying landscaping in housing and around support buildings in the cantonment area.

YEAR	POPULATION
1	300
2	360
3	594
4	980
5	1617
6	2668
7	4403
8	7265
9	11986
10	19778

Table 4-3 Projected Deer Population

In order to maintain appropriate herd numbers, harvest opportunities would be maintained or raised when possible. Non-DOD hunters would be given access when Threat Protection Force Condition (TPFCON) guidelines allow, but this would result in an administrative procedure change for those wishing to enter secure zones. Hunters must access these areas though security checkpoints and adhere to guidelines for post entrance as put forth by the Provost Marshal's Office. Certain TPFCON levels can restrict hunting availability to DOD personnel only during high threat levels. Herd size would be monitored to determine growth rates, and harvest percentages would be calculated to determine appropriate levels of take. No long-term impact to hunting opportunity is anticipated, although there may be short periods when access is restricted to secure personnel only. Deer populations would be controlled through hunting or other special methods when deemed necessary.

Long-term shifts in the white-tailed deer populations within the fenced perimeter are expected. Herd health and population size would be monitored and maintained through the application of appropriate management. Hunting opportunities would increase when possible and harvest potentials would likely rise dramatically as herd size increases. There would be no long-term degradations of hunting opportunity within the project area, and harvests per effort would undoubtedly increase over time. Harvest potentials from adjoining areas could decrease for a short

period due to the lack of movement across the boundary, but would return to normal levels as immigration from unrestricted populations takes effect. No long-term degradations to adjacent white-tailed deer herds are expected. The additional construction of several fisheries impoundments would increase long-term outdoor recreation opportunities and would be considered beneficial overall.

Erosion control impoundments that are constructed for the project would be converted to fishing ponds where possible. (See Table 4-2) This would provide multiple acres of managed impoundments for outdoor recreations and would be considered long term beneficial for Morale, Welfare and Recreational initiatives.

4.6.1 **Cumulative Effects**

The environmental consequences from past, present, and reasonably foreseeable future Army actions (see Section 1.4.3, 4.2.2, 4.3.1, 4.4.2) when collectively combined with such consequences of the proposed action, would not individually or collectively cause a significant cumulative impact on the deer and wildlife population. This is because the installation has been a Wildlife Management Area (WMA) for decades and deer and wildlife have been controlled and protected by procedures and policies applicable to WMAs and quality game management. As noted in Section 3.6, no other social or economic parameters are involved or impacted by the proposed action: no jobs would be lost or added because of the proposed action'; there would be effect on the local or regional area of economic influence; no minority or low-income residences would be impacted because of this project located entirely on Federal land (see Section 1); the proposal does not involve any impact in the area of environmental justice (see Section 4.7). Accordingly, there would be no significant impact on either the social or economic environment from the combined effects of the proposal (since the proposal's effects are limited to deer and wildlife) and those of other relevant past, present and reasonably foreseeable future Army actions.

4.7 Environmental Justice

Effects would be considered significant if the action results in adverse environmental, economic, social, or health impact from federal actions and policies on minority and low-income populations or communities.

NO ACTION ALTERNATIVE – The absence of an Access Control Fence will not change the numbers of minorities at Fort Polk. The current accessibility to the installation is based on a persons' need to be on post to support the Army. It in no way is related to race or income and therefore cannot cause a disproportionate impact to low income and minority populations.

PREFERRED ALTERNATIVE –As with the no action alternative, accessibility to the installation is based on need to support the Army mission and not income or race. Additionally, the proposed access control fence would not be constructed off of the installation so it could not be constructed in an area to take advantage of low income or minority neighborhoods.

4.7.1 **Cumulative Effects**

No current Army actions, no past Army actions (see Section 1.4.3) and reasonably foreseeable Army actions (see Transformation EIS noted in Section 1.4.3 and the DMPBAC EA referred to in Section 4.2) have or would individually or collectively together with the proposed action impact minority and low-income residents.

4.8 Effects on Children

Effects would be considered significant if the action results in adverse environmental, health risk or safety risk to children.

NO ACTION – The absence of an Access Control Fence will not change the numbers of children at Fort Polk. The absence of an Access Control Fence does allow children to access or leave the Cantonment area through uncontrolled points and because access is less controlled without the fence, individuals who have circumvented the controlled points of access may approach children.

PROPOSED ACTION – The Proposed Action would occur within the boundaries of existing Army-owned and Army-permitted USFS land. No additional traffic would impact children. Construction activities would take place in areas that would be off-limits to the public during construction. The Army would continue to adhere to all applicable safety regulations and procedures. There are no anticipated activities related to the proposed action that would disproportionably impact children.

4.8.1 **Cumulative Effects**

No current Army actions, no past Army actions (See Section 1.4.3) and reasonably foreseeable Army actions (see Transformation EIS noted in Section 1.4.3 and the DMPBAC EA referred to in Section 4.2) would individually or collectively together with the proposed action impact children.

4.9 Biodiversity

Identified as a potential environmental concern during scoping, further review determined that the ACF construction and ROW would not change the overall diversity of plant, bird, aquatic, rodent, amphibian, snake or lizard species in the footprint of the project. The only wildlife potential impacted would be the white-tailed deer population. This is further discussed in 4.6 Socioeconomic- Recreation, above.

4.9.1 **Cumulative Effects**

There are no cumulative impacts to biodiversity from anticipated impacts from the proposal and when incrementally added to environmental effects of other relevant past (see Section 1.4.3), present and reasonably foreseeable future Army actions (see Transformation EIS in Section 1.4.3 and the DMPBAC EA referred to in Section 4.2).

SECTION FIVE – CONSLUSIONS REGARDING IMPACTS OF THE PROPOSAL

5.1 Consequences of the Proposed Action

TABLE 5.1
SUMMARY OF ENVIRONMENTAL AND SOCIOECONOMIC EFFECTS

No Action Alternative	Proposed Action
Land Use	
Installation land use would not be changed.	Installation land use would not be changed.
Cultural Resources	
No effects to cultural or historically significant sites are expected.	There are no known occurrences of cultural or historically significant sites within the footprint of this Proposed Action. Prior to the start of the project, workers would be instructed on recognizing and avoiding cultural resources. If an artifact is discovered, all activities would be stopped. A buffer zone would be added to newly identified site boundaries for the protected sites.
Surface Water Quality	
No effects to existing water quality are expected	Short-term minor impacts to sedimentation and turbidity could occur during the construction phase of this project. No other activities associated with this project would contribute to further degradation of water quality therefore there is no impact to water quality. JRTC and Fort Polk would comply with requirements to develop and comply with a site-specific Storm Water Protection Plan and LDEQ requirements.
Biological Resources: Wildlife	
Existing environmental and natural resource management plans, training regulations and standard operating procedures to minimize environmental degradation would continue to afford sufficient protection for wildlife and aquatic species under the No Action Alternative	Some species would be expected to benefit slightly from cleared ROWs; there would be no overall effects to migratory populations. Small mammal populations that exhibit limited home range sizes would not be impacted. Amphibian population numbers would not be impacted. Impounded populations would be monitored and controlled through appropriate management techniques. Off site adjacent populations would exhibit short-term shifts due to the inhibitions of free movement out of the fenced area. This shift would be short term due to the repopulation potential from unrestricted populations. There would be no permanent loss or substantial degradation of wildlife populations on a landscape scale.
Biological Resources: Vegetation	
Minor impacts to plant communities and sensitive plant species could occur as a result of routine military training, routine traffic, and other routine activities	The action would not result in landscape scale changes to plant communities because the disturbance is a long linear disturbance and the regional population should no be adversely effected. Sensitive plant areas would be considered before development of any impoundment ponds created to enhance drainage.
Biological Resources: Threatened or Endangered Species	
No effects to existing RCW	The Habitat Management Unit of 35,800 acres is met to provide required baseline habitat for the RCW.
Biological Resources: Wetlands	
Baseline conditions for wetlands would not be altered.	Due to the installation's intent to comply with Section 404 of the CWA, no significant impacts from this project. The installation would rely on USACE to determine any necessary mitigation actions.

Socioeconomic: Recreation (Hunting)	
There would be no effect on hunting or other recreational opportunities at Fort Polk.	Deer populations would be controlled through hunting or other special methods and hunters would be given access during season and when TPFCON guidelines allow.
Environmental Justice	
There would be no effect on minorities or low-income people with bona fide reasons to circumvent the cantonment areas.	Additional travel distances are not substantially greater than current travel distances. Individuals of minority and/or low-income populations would not be expected to alter their travel disproportionately more than others.
Effects on Children	
There would be no effect on children residing or visiting the installation.	The Army would continue to adhere to all applicable safety regulations and procedures that impact children. During construction activities, construction areas would be off-limits to the public during construction.
General Compliance	
JRTC and Fort Polk would continue to comply with all federal or state environmental rules, regulations or permits held by the installation.	JRTC and Fort Polk would comply with all federal or state environmental rules, regulations or permits held by the installation and fulfill requirements for environmental stewardship

Table 5-1 Summary of Effects

5.2 Mitigation

Mitigation, attenuation, and avoidance of the proposal's potential effects on the environmental were considered and analyzed as part of the detailed environmental analysis of the proposal's anticipated environmental consequences. However, no specific mitigation measures were identified as necessary to mitigate or attenuate the types of environmental consequences resulting from the proposal. Rather, environmental effects from the proposal would be adequately addressed through best management practices already in effect, and that will continue to be applied in the future, and through the JRTC and Fort Polk aggressive program of land management, monitoring, and sound environmental stewardship, which have had positive effects on the environment.

5.3 Conclusions

Based on the findings of the EA, implementation of the Proposed Action would not result in significant effects to the quality of the human or natural environment; therefore, preparation of an Environmental Impact Statement is not required. Publication of a Finding of No Significant Impact is recommended.

SECTION 6.0 – REFRENCES

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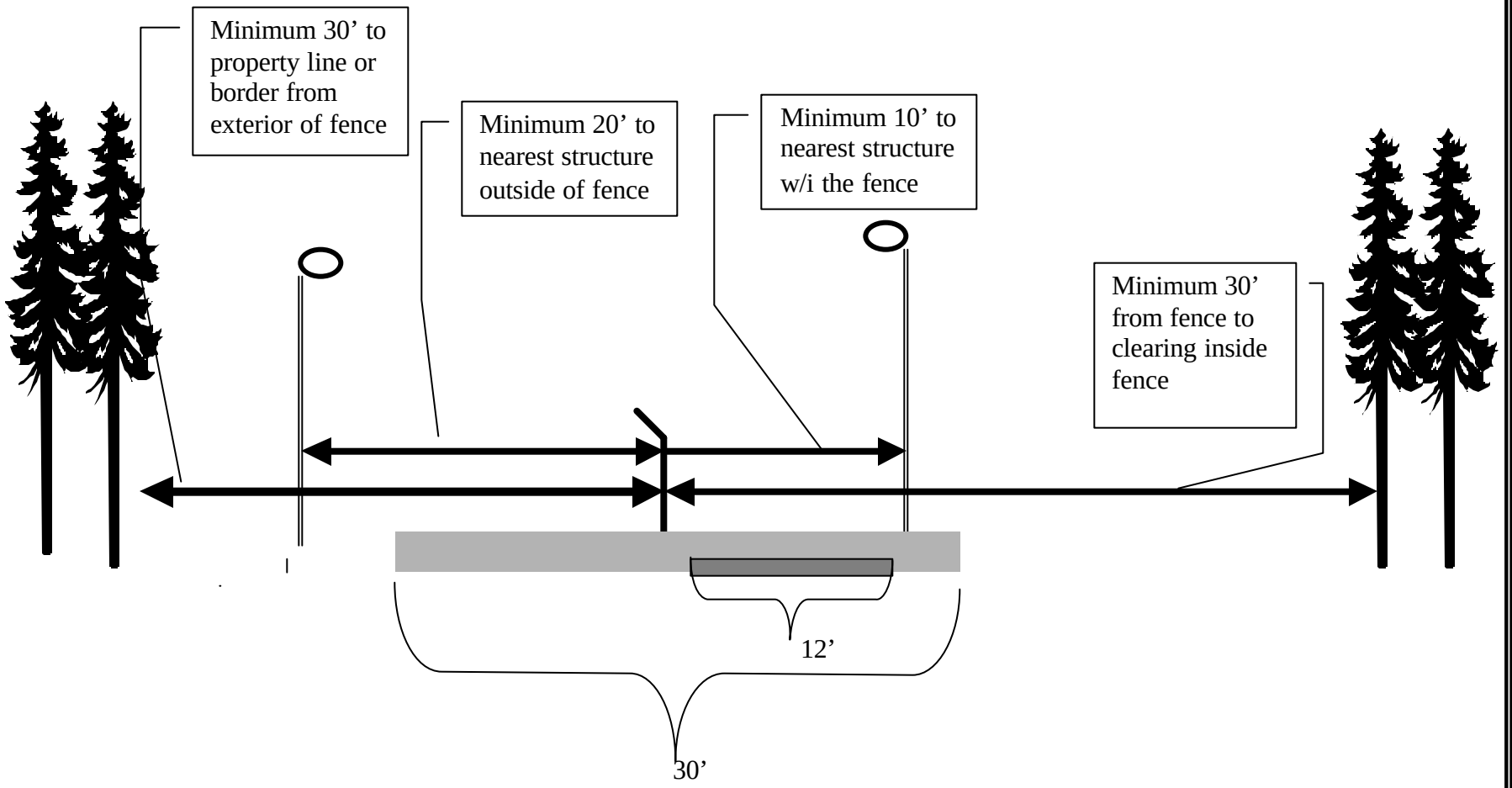
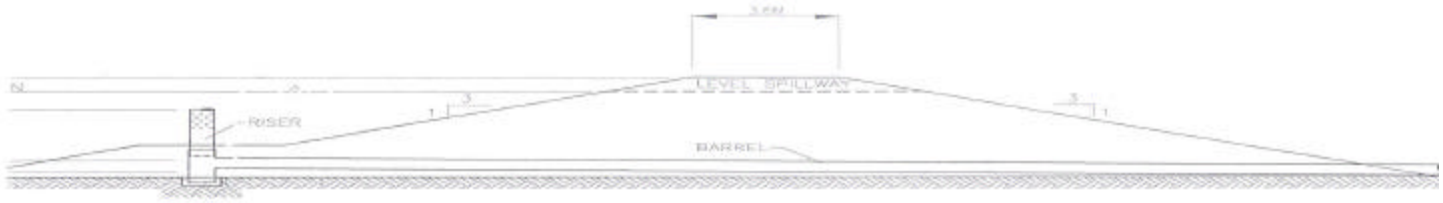
U.S. Fish and Wildlife Service. 2003. Recovery plan for the red-cockaded woodpecker: second revision. U.S. Fish and Wildlife Service. Atlanta, GA. 296pp.

APPENDICES

Appendix A


Minimum 30’ to property line or border from exterior of fence
Minimum 20’ to nearest structure outside of fence
Minimum 10’ to nearest structure w/i the fence
Minimum 30’ from fence to clearing inside fence
12’
30’
LEGEND
New disturbance
Light poles
Proposed access road
Property line or edge of clearance

A-1



SEDIMENT POND SECTION

SEDIMENT POND ELEVATION

SCALE: 1:1000

APPENDIX B

CLUSTER	SEGMENT	WIDTH IN LF	LENGTH IN LF	TOTAL SQ. FT.	ACRAGE	CLUSTER TOTAL
5a	29	20	1900	38000	0.87	
	30	70	800	56000	1.28	
	31	20	2285	45700	1.05	
	32	20	1450	29000	0.66	
						3.86
59a	36	40	1900	7600	1.74	
	37	70	640	44800	1.03	
	38	30	2245	67350	1.55	
	39	40	250	10000	0.23	
						4.55
59c	37	70	640	44800	1.03	
	38	30	2245	67350	1.55	
	39	40	1363	54520	1.25	
	40	0	720	0	0	
						3.83
TOTAL						**12.24**

Table B 1 RCW Clusters located near proposed fence

HMU ACREAGE			
Segment	Length In feet	Width In feet	Acreage
8	2458	35	1.97
9	7880	30	5.43
10	6299	10	1.45
11	5244	30	3.61
12	6470	24	3.71
15	3777	5	0.43
16	1660	45	1.71
17	11990	35	9.63
18	1660	30	2.60
20	7210	30	4.97
21	1400	55	1.77
22	7762	2-	3.56
24	5010	10	1.15
26	2165	40	1.99
28	2800	30	1.93
29	1845	20	0.85
30	1301	70	2.09
31	3385	20	1.55
32	1750	20	0.80
33	1360	70	2.09
34	460	30	0.32
35	3450	70	5.54
36	3262	40	3.00
37	640	60	1.03
38	2245	3-	1.55
39	1363	40	1.25
			65.98

Table B-2 1 Habitat Management Unit for RCW at Fort Polk

[redacted]

From: [redacted]
Sent: Wednesday, April 02, 2003 11:19 AM
To: [redacted]
Subject: FW: Potential Problem with Installation Security Fencing ref Hunting

-----Original Message-----
From: [redacted]
Sent: Wednesday, September 18, 2002 3:35 PM
To: [redacted]
Cc: [redacted]
Subject: Potential Problem with Installation Security Fencing ref Hunting

It is my understanding that Security has recommended "no hunting" within the 12,000+ acres to be enclosed within the fence.

"No hunting" will likely create public controversy. Our commitment under the LUA EA mitigation was to increase hunting opportunities for the public.

Under the Army regulations for REC level NEPA analysis, a proposed project which could create public controversy cannot be analyzed at the REC level, but must be analyzed at the EA level.

Withdrawal of the existing REC and elevation to the EA level will delay the fencing project.

Consideration at earliest instance should be given to allowing huntingwithin the fenced area to avoid delay/loss of the fencing project. If the proponent will not consider changing his determination on hunting, this issue should be elevated for command review.

Special hunting considerations could be developed for the fenced areas.

1

[redacted]

From: [redacted]
Sent: Friday, April 11, 2003 11:09 AM
To: [redacted]
Subject: FW: BUB Notes (21 Nov) - security fence alignment and environmental

-----Original Message-----
From: [redacted]
Sent: Friday, December 06, 2002 8:43 AM
To: [redacted]
Cc: [redacted]
Subject: RE: BUB Notes (21 Nov) - security fence alignment and environmental

Great summary thanks. MAJ Phillips will confirm any scheduled meeting with GC. MAJ Philips will be TDY until Dec 18. He will attempt to schedule time after he returns.

MAJ S

-----Original Message-----
From: [redacted]
Sent: Thursday, December 05, 2002 4:26 PM
To: [redacted]
Cc: [redacted]
Subject: BUB Notes (21 Nov) - security fence alignment and environmental

Sir,

I just wanted to follow-up on the meeting we had this afternoon. If any of the following is incorrect please let me know.

- There are three issues we need to prepare to present to the GC in preparation to respond to the CG.

a. Fence Alignment - Ellis smith to provide
b. Environmental - All necessary laws and permits are being complied with and obtained
c. Hunting - Following construction we will continue to allow hunting as it is currently conducted inside the fence.

- Four people will carry the message (Mr. Weaver, Mr. Smith, yourself and me).
- A table-top presentation is expected.
- We will predominantly show the alignment, but each person will bring sufficient information to discuss issues that pertain to their field of expertise.
- Since the initial meeting is expected to be short it would be best to schedule it for sometime the week after next (DEC 15-19).

My phone number is [redacted] if you need to contact me.

Thanks

[redacted]

1

APPENDIX C

Wetland and Sensitive Plant Species Survey for the Proposed Fort Polk Military Installation's Security Fence

Prepared by

RAVEN

Environmental Services, Inc.

P.O. Box 6482
Huntsville, Texas 77342

Submitted to:

AFZX-DPW-ENRMD

1823 23rd St., Building 2505

Attn: Wayne Fariss

Environmental & Natural Resources Management Division, DPW
Fort Polk, Louisiana 71459

February 2003

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Wetland and Sensitive Plant Species Survey for the Proposed Fort Polk Military Installation's Security Fence

100 Introduction

Raven Environmental Services Inc. (Raven) is a natural resource management and planning company located in Huntsville, Texas. Raven personnel have extensive experience in threatened, endangered and sensitive (TES) species surveying. Raven has performed listed species surveys for a wide range of clients and interests. TES species surveying requires cross-discipline expertise in forest management, wildlife biology, botany, and ecology. The staff of Raven represents this broad range of knowledge and skills.

Fort Polk Military Installation in Vernon Parish, Louisiana has proposed a plan to enclose approximately 12,000 acres of the residential / military quarters (cantonment) with a 7' chain link security fence (topped with 3 strands of barbed wire). Ancillary features of the proposed security fence include an interior access road, paralleling much of the perimeter, and security lighting. The approximate length of the proposed security fence is 30 miles and will encompass North and South Fort Polk cantonment in the western portion of the military installation (Figure 1). Much of the proposed fence route follows existing roads, utility right-of-ways (ROW) and fire breaks. However, a portion of the proposed fence will traverse undeveloped-forested areas that may contain threatened, endangered or sensitive (TES) plant species, rare plant communities and/or wetland habitats.

Federally listed "endangered species" are protected from "take" situations under the Endangered Species act of 1973 (Pub. L. 93-205, 87 Stat. 884 (16U.S.C. 1531 et seq.)). Additionally, the Louisiana Department of Wildlife and Fisheries' (LDWF) Louisiana Natural Heritage Program provides a list of the rare plant species of Louisiana (1999). "Wetlands" as described in 33 CFR Part 328.3 are "…areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions." These habitats typically include swamps, marshes, bogs, and similar areas. The U.S. Army Corps of Engineers (Corps) is authorized under Section 404 of the Clean Water Act (33 U.S.C. 1344) to regulate the discharge of dredged and fill materials into all waters of the United States, including wetlands.

Preliminary engineering requires an estimated 70' fence ROW to be cleared and improved to construct and maintain the proposed security fence in the undeveloped areas of the cantonment. Throughout the entire parameter, approximately 16 acres of undeveloped "new" habitat will be cleared to create new ROW. Of this 16 acres, 4.98 acres will require "clearing and grubbing" to facilitate road construction. An additional 41 acres will be cleared to widen existing ROW's. Clearing will include brush-hogging or manually

removing of all woody vegetation. In addition to constructing the security fence, numerous recreational fishing ponds and sediment basins will be created along the proposed fence route. Such ponds will be established only at intermittent stream and fence intersections.

Seventy-one sample points were sampled from 15 October – 11 December, 2002. At 16 sample points, along the proposed fence route, we recorded one or more listed plant species. We documented nine plant species that have state conservation ranks ranging from critically imperiled to vulnerable (Natureserve 2003, LDWF 1999). Additionally, we documented wetlands at 37 of 55 potential wetland sample points. Potential wetland points were selected due to the occurrence of one or more wetland indicator criteria.

100.1 Area description and Vicinity Map

Fort Polk Military Installation is in the Western Gulf Coastal Plain physiographic region of the Southeastern U.S. Upland longleaf pine (*Pinus palustris*) habitat is the predominate forest type of the military installation. Such habitat once covered much of the southeastern United States; from the southern piney woods of East Texas to the mid-Atlantic Coastal Plain of North Carolina (Conner et al. 2001). The western range of the installation is a mosaic of upland longleaf habitat, mixed pine / hardwood forests, riparian forest communities, residential and commercial facilities and open military training grounds.

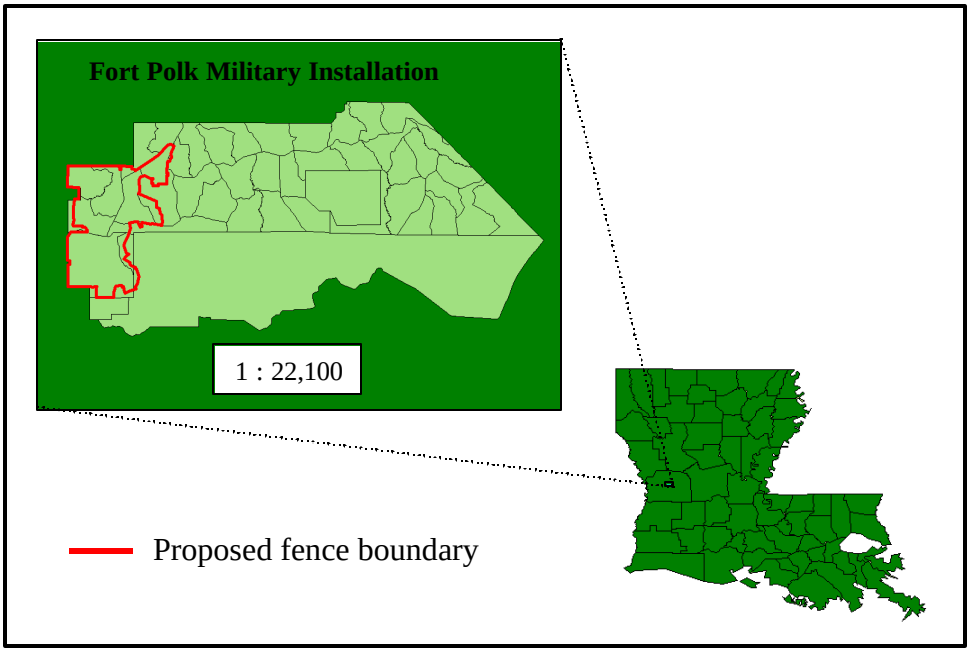

Figure1. Proposed security fence boundary in the Fort Polk Military Installation (Vernon Parish, Louisiana – February 2003).

200 Methods

Raven was commissioned to survey the proposed security fence route, ROW and pond areas for the presence of wetlands and/or threatened, endangered or sensitive plant species that may be adversely impacted by constructing the security fence. Prior to on-site surveying Raven consulted with Environmental and Natural Resources Management Division and DPW personnel, reviewed remote sensing data and reviewed relevant literature. Each site was monumented with an orange pin-flag or bright pink tape-flagging and GPS'd with a Trimble Geoexplorer III.

200.1 Wetland Evaluations

Wetland determinations comply with the 1987 Army Corps of Engineers (Corps) Wetland Delineation Manual for "routine" methods. Three parameters analyzed to determine wetland status include vegetation, hydrology and soils. Only sites having all three wetland criteria were conferred wetland points. Sites that were disturbed by recent human activities or natural events and resulted in one or more indiscernible wetland parameters were considered "atypical situations". In such case, all efforts were made to determine the wetland / non-wetland status of a given site prior to disturbance.

200.2 Threatened, Endangered or Sensitive Plant / Community Surveys

We surveyed for plant species included on the Louisiana Natural Heritage Program's "Rare Plant Species of Louisiana" (1999). Updated conservation status ranks were confirmed via www.natureserve.org (2002). In addition to documenting the presence of a listed species, our plant surveys cataloged the local plant community, soil texture, general topographic position and common plant associates (overstory dominants, common midstory and groundcover).

300 Results and Discussion

Raven personnel sampled 71 potential wetland or TES plant sites between 15 October – 11 December, 2002. We performed wetland determinations at 55 sample sites. Thirty-seven of such sites exhibited wetland conditions and 18 sites did not meet wetland criteria. Potential wetland points were sampled due to the occurrence of one or more wetland indicator criteria. At 16 sample points we documented one or more TES plant species or a species/community of concern. We documented nine plant species that have state/federal conservation ranks ranging from critically imperiled to vulnerable (Natureserve 2003, LDWF 1999). We collected GPS coordinates (>/= 60 points) at approximately 95 % of the survey sites. We were not able to GPS some sites, most likely due to dense canopy closure and/or low site topography.

Maps provided in section 600 illustrate the locations of each sample site. Additional features depicted on the maps include topography, streams, roads, proposed fence boundary, proposed pond and sediment basins, known RCW tree locations and distinct Fort Polk taxa (flora and fauna).

300.1 Wetland Determinations

Sixty-seven percent of our wetland determinations resulted in a wetland designation. For such designation a given site must exhibit wetland criteria in all three variables; vegetation, hydrology and soils (USACOE 1987). Tables 1 and 2 summarize the field results for the wetland and non-wetland sample sites.

In sites 12C and 12E (Table 1), much of the soil data not available are the result of highly disturbed site conditions (atypical conditions). In such situations we evaluated the existing vegetation, hydrology and topographic position of the site to predict the conditions prior to disturbance then made the evaluation. In sites 2A, 11C, 12A and 12B the soil data are not available due to complete inundation at the site.

At several of the non-wetland sites no environmental variables were recorded. Typically these areas were easily discerned as non-wetland habitat due to an obvious lack of one of the three primary wetland aspects. However, we usually GPS'd their location and delineated the sites on the maps in section 600 to clarify potential on-site inspection. Soils data are not provided for sites 3C, 15B and 19A. Soil analysis was not conducted at these locations since they lacked either wetland vegetation and/or hydrology.

Table 1. Wetland sample points and associated characteristics along the proposed Fort Polk security fence route (Vernon Parish, Louisiana - February 2003).

Survey Point (FPWET…)	Vegetation[a]	Hydrology[b]		Soils[c]				
	% Wetland Plant Spp.	# 1° Wet. Indicator	# 2° Wet. Indicator	Pit Depth (in.)	Matrix Color-Depth-Horizon (Below A horizon)	Mottling Depth (in.)	Depth to Water (in.)	Other Hydric Indicator
01A	1.00	3	2	>12	10 YR 4/1 - 1" - B1	1	12	None
01B	0.64	1	1	>20	10 YR 5/3 - 0.5" - E1	None	20	None
01D	0.90	3	2	>12	10 YR 4/1 - 1" - E1	None	12	None
02A	1.00	3	1	N/A	N/A	N/A	0	N/A
02B	1.00	4	3	>12	10 YR 4/2 - 1" - Bt	1	0	None
02C	1.00	2	1	>12	10 YR 6/2 - 1" - B1	3	10	None
03A	0.83	1	2	18	Disturbed	0	15	None
03D	1.00	1	4	12	7.5 YR 7/2 - 2" - Bt	2	10	None
03E	1.00	3	2	20	Disturbed	2	16	None
04A	0.90	1	1	20	7.5 YR 5/1 - 2" - Bt	2	18	Concretions
04C	0.70	1	1	18	Disturbed	2	0	None
07A	0.92	1	2	20	10 YR 4/1 - 1" - B1	3	15	None
07B	1.00	1	1	>10	10 YR 4/1 - 2" - B1	2	7	None
07C	0.80	1	2	18	10 YR 5/1 - 3" - B1	3	18	None
07D	1.00	1	2	14	10 YR 5/1 - 2" - B1	2	8	Sulfidic odor
07E	0.87	2	1	8	10 YR 4/2 - 0.5" - Bt	2	8	None
08A	1.00	1	2	13	10 YR 5/2 - 2" - B1	2	13	None
09A	0.87	1	2	12	10 YR 4/1 - 2" - E	None	5	Sulfidic odor
09B	0.89	1	1	12	10 YR 4/1 - 2" - E	None	5	None
09C	0.80	1	1	12	10 YR 4/1 - 0.5" - E	None	8	None
11A	0.89	4	2	12	7.5 YR 3/1 - 0.5" - E	0.5	10	None
11B	0.92	2	2	12	7.5 YR 4/1 - 1" - E	1	7	Sulfidic odor
11C	0.75	2	1	N/A	N/A	N/A	N/A	N/A
12A	1.00	2	1	N/A	N/A	N/A	N/A	N/A
12B	1.00	1	1	N/A	N/A	N/A	N/A	N/A
12C	0.78	1	1	N/A	N/A	N/A	N/A	N/A
12D	1.00	1	2	20	7.5 YR 4/1 - 2" - B1	10	18	None
12E	0.90	1	1	N/A	N/A	N/A	0	N/A
13A	1.00	5	2	18	10 YR 4/2 - 0.5" - E	1	16	Sulfidic odor
14A	0.60	1	1	20	10 YR 4/2 - 15" - E	1	6	None
14D	0.67	1	2	18	10 YR 4/2 - 2" - E	3	16	None
15A	0.78	2	1	12	10 YR 6/2 - 0.5" - B1	2	10	None
16A	1.00	0	2	>15	10 YR 6/1 - 1" - B1	12	N/A	None
16B	0.90	1	1	20	7.5 YR 5/2 - 3" - E1	3	15	None
16D	0.83	2	1	16	10 YR 7/2 - 1" - E1	None	10	High organics
16E	0.73	3	2	12	10 YR 4/2 - 2" - Bt	2	3	None
17A	0.71	3	3	12	10 YR 4/2 - 1" - B1	2	6	None

[a] **Hydrophytic Vegetation**: > 0.50 of the dominant species must be OBL, FACW, OR FAC.

[b] **Wetland Hydrology**: >/= one 1° indicator or >/= two 2° indicators.

[c] **Wetland Soil Conditions**: histosol, histic epipedon, sulfidic odor, aquic moisture regime, reducing conditions, gleying / low chroma colors, concretions, high organics in surface of sandy soils, organic streaking in sandy soils, on hydric soil list or other.

Table 2. Non-wetland sample points and associated characteristics along the proposed Fort Polk security fence (Vernon Parish, Louisiana - February 2003).

Survey Point (FPWET…)	Vegetation[a]	Hydrology[b]		Soils[c]				
	% Wetland Plant Spp.	#1° Wet. Indicator	#2° Wet. Indicator	Pit Depth (in.)	Matrix Color-Depth-Horizon (Below A horizon)	Mottling Depth (in.)	Depth to Water (in.)	Other Hydric Indicator
01C	0.75	1	1	>20	10 YR 4/3 - 1" - E1	None	20	None
01E	0.92	1	1	18	10 YR 4/2 - 1" - E1	None	18	None
03B	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
03C	0.66	0	1	N/A	N/A	N/A	N/A	N/A
04B	0.80	0	1	>15	10 YR 4/2 - 2" - B1	2	None	None
04D	0.55	1	1	>15	10 YR 4/2 - 4" - Bt	None	None	None
04E	0.87	1	1	18	10 YR 5/4 - 4" - Bt	4	None	None
09D	0.57	1	0	12	10 YR 5/4 - 0" - Bt	None	8	None
14B	0.78	1	1	30	7.5 YR 4/4 - 3" - E	None	28	None
14C	0.83	2	1	18	7.5 YR 4/3 - 0.5" - B	2	18	None
15B	0.78	0	1	N/A	N/A	N/A	N/A	N/A
16C	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
16F	0.71	0	1	15	7.5 YR 5/3 - 2" - E	8	15	None
18A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
19A	1.00	0	2	N/A	N/A	N/A	N/A	N/A
19B	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
19C	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
19D	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

[a] **Hydrophytic Vegetation**: > 0.50 of the dominant species must be OBL, FACW, OR FAC.

[b] **Wetland Hydrology**: >/= one 1° indicator or >/= two 2° indicators.

[c] **Wetland Soil Conditions**: histosol, histic epipedon, sulfidic odor, aquic moisture regime, reducing conditions, gleying / low chroma colors, concretions, high organics in surface of sandy soils, organic streaking in sandy soils, on hydric soil list or other.

300.2 Plant and Community Surveys

In Louisiana two plant species are classified as endangered (*Isoetes louisianensis* and *Schwalbea americana*) and one species as threatened (*Geocarpon minimum*) by the U.S. Fish and Wildlife Service (USFWS 1992). None of these species have been recorded in the Fort Polk Military Installation (Hart and Lester 1993, Johnson et al. 1993). However, numerous sensitive plant species have been documented in the Fort Polk Military Installation lands.

Since our surveying was conducted at the end of the growing season (Oct. – Dec. 2002), some TES species were potentially overlooked in the field. To compensate for such situations, we carefully examined habitat type and condition for the potential occurrence of a TES species. Section 500 describes and provides pictures (when available) of each species we documented in our survey.

Collectively, we documented seven species ranked from critically imperiled to vulnerable in Louisiana (LDWF 1999). Bog coneflower (*Rudbeckia scabrifolia*) was the most frequent listed species we observed throughout the surveying. This is likely attributed to the plants perennial nature and relatively hardy leaf and stem structure. Other listed species recorded included Missouri coneflower (*Rudbeckia missouriensis*),

Eastern purple coneflower (*Echinacea purpurea*), Drummond's yellow-eyed grass (*Xyris drummondii*) and Texas aster (*Symphyotrichum drummondii* var. *texanum*). Carolina lily (*Lilium michauxii*) has a "not yet ranked" conservation status (S?), but is certainly very uncommon in its western range. Two additional species (we recorded, but not listed) Florida hempvine (*Mikania cordifolia*) and Giant spiral ladies' tresses (*Spiranthes longilabris*) are regarded as uncommon or rare in the Western Gulf Coastal Plain (Keith, pers. comm.).

As previously mentioned, bog coneflower was recorded in numerous sample sites. Several of the proposed ponds would inundate the lower slope, open seepage areas this species inhabit (FPPS07A, FPPS09B, FPPS11B & FPPS11C). Bog coneflower appears relatively prevalent on Fort Polk lands; "taking" small, local populations may not adversely effect the regional population. However, Vernon Parish is the last refuge for bog coneflower (Brown 1986, Keith, pers. comm.), as such, any actions that may adversely effect this species should be strongly considered. Additionally, several listed species share similar habitat with bog coneflower and may not be readily identified at the time of the survey (October – December). Some examples that inhabit open seepage areas on Fort Polk include Drummond's yellow eyed grass, black snakeroot (*Zigadensis densus*) and Oklahoma grass-pink (*Calapogon oklahomensis*) (Johnson et al. 1993, LDWF 1999).

At survey point FPPS16A we documented a rich mesic creek bottom. This sample point, which is just a few hundred feet north of a residential area (Map 16), contains a wide array of uncommon and/or unusual plant species. Such species include cranefly orchid (*Tipularia discolor*), Carolina lily, beechdrops (*Epifagus virginiana*) and Indian-pipe (*Monotropa uniflora*). The overstory stratum of this community is dominated by American beech (*Fagus grandifolia*), white oak (*Quercus alba*), loblolly pine (*Pinus taeda*) and Southern magnolia (*Magnolia grandiflora*). Beech / Magnolia forests are ranked as vulnerable (G3) throughout their global distribution (Natureserve 2002). A proposed 0.7-ac pond will inundate much of this unusual plant community. Due to the unusual species composition of this area and scarcity of this community type on Fort Polk and the Western Gulf Coastal Plain, this area should likely be considered a strong candidate for conservation management.

At survey points FPPS03A, FPPS04A & 04B we documented specimens of purple coneflower and Missouri coneflower. These composites are found in open, calcareous prairies on Fort Polk. The Missouri coneflower specimen documented in point FPPS04A is situated several hundred feet south of the proposed fence line; therefore, will not likely be affected by the fence construction. The Missouri coneflower and purple coneflower populations in points FPPS03A and FPPS04B; respectively, would be adversely impacted with extensive right-of-way improvement, such as topsoil alteration and reseeding with non-native vegetation.

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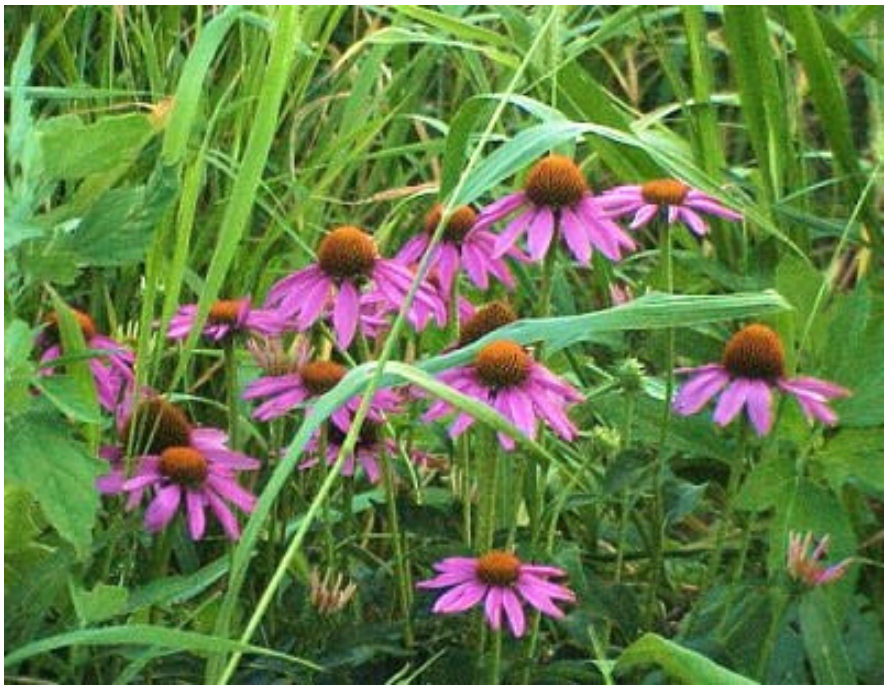
500 Plant Descriptions / Locations

Echinacea purpurea - (L.) Moench
Family: Asteraceae
Common Name: Eastern purple coneflower

Global Heritage Status Rank: G4 (27Feb2000)

National Heritage Status Rank: N4 (27Feb2000)

Louisiana Conservation Status: S1S2 (critically imperiled / imperiled)



Description: Perennial herb, 60 – 180 cm tall. Hairy / glabrous stem, sometimes glaucous. Basal leaves (up to 25 cm long) vary from broadly ovate to narrowly ovate and predominately coarsely toothed (except for leaf base). Stem leaves (7-20 cm long) petiolate to sessile above, serrate to entire and rough to the touch. Heads 1-4 cm in diameter (excluding rays). Ray flowers (3.2-6 cm long) are typically purple (rarely white).

Habitat: Open calcareous prairies and woods.

Occurrence: FPPS04b

Lilium michauxii - Poir.
Family: Liliaceae
Common Name: Carolina lily

Global Heritage Status Rank: G4G5

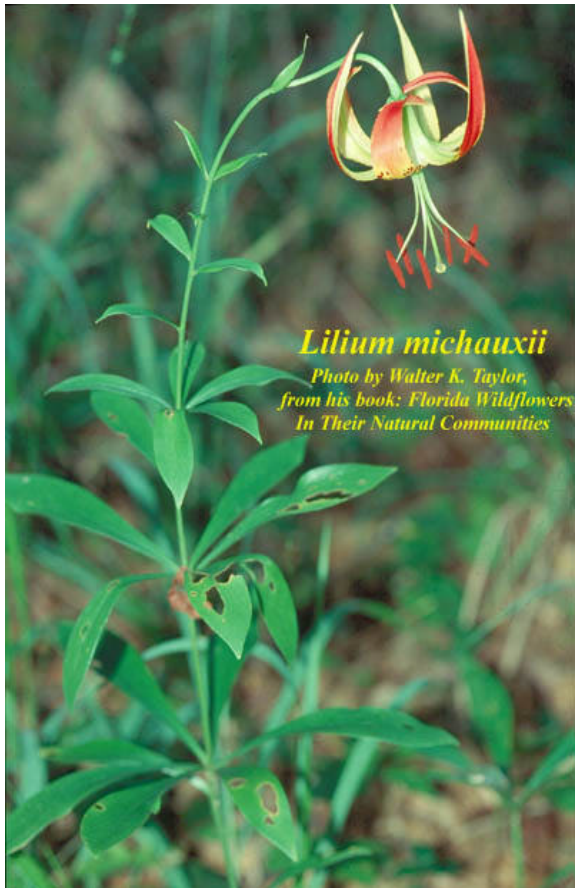
National Heritage Status Rank: N4? (17Dec1994)

Louisiana Conservation Status: S? (uncertain)

Description: Perennial herb with erect stem (50-120 cm) and scaly bulb. Predominately whorled and entire leaves (6-12 cm long & 1.0-2.5 wide). One or two large showy, nodding flowers. Six-merous flower with orange-red and purple spotted perianth.

Habitat: Mesic woodlands associated with sandy creek bottom.

Occurrence: FPPS16a



*Pictured used with permission of
Theresa C. Schrum
www.ecoterralandscape.com

Mikania cordifolia - (L. f.) Willd.
Family: Asteraceae
Common Name: Florida hempweed, climbing boneset, hemp vine

Global Heritage Status Rank: G5 (secure)

National Heritage Status Rank: N? (01Aug 1993)

Louisiana Conservation Status: SR

Description: Composite vine with sparsely pubescent stem and opposite leaf arrangement. Leaves are ovate or somewhat kidney-shaped, often large-toothed and up to 12 cm long and wide. Bracts subtending flowering head are 6-8 mm long. Discoid flower typically white, sometimes pink tinged.

Habitat: Moist areas and/or bottoms.

Occurrence: FPPS02a

Not Available

Rhynchospora capitellata - (Michx.) Vahl
Family: Cyperaceae
Common Name: Brownish beakrush

Global Heritage Status Rank: G5 (Globally secure)

National Heritage Status Rank: N? (01Aug1993)

Louisiana Conservation Status: S1 (Critically imperiled)

Description: Sedge reaching 50 – 75 cm in height. Triangular stem (cross section), leaves shorter than stem and narrow (0.5 - 3.5 mm) wide. Inflorescence composed of 1-6 spikelets in widely separated and globular clusters. Body of achene (small, hard & 1 seeded fruit) obovately shaped with perianth bristles downwardly barbed. Relatively similar to appearance to several common *Rhynchospora* spp.

Habitat: Occurs in bogs, wet pine savannas , stream banks, etc.

Occurrence: FPPS11a

Rudbeckia missouriensis - Engelm. ex C.L. Boynt. & Beadle
Family: Asteraceae
Common Name: Missouri coneflower

Global Heritage Status Rank: G4G5

National Heritage Status Rank: N? (01Aug1993)

Louisiana Conservation Status: S1S2 (critically imperiled / imperiled)

Description: perennial composite with broadly linear basal leaves and leafy tufts arising only at the base of the stem. Stems and leaves densely hairy and branches ascending. Blooms in late summer - late fall.

Habitat: calcareous prairies of Western Gulf Coastal Plain.

Occurrence: FPPS03a & FPPS04a

Rudbeckia scabrifolia - L.E. Brown
Family: Asteraceae
Common Name: Bog coneflower

Global Heritage Status Rank: G2G3 (13Apr2000)

National Heritage Status Rank: N2N3 (21Mar2001)

Louisiana Conservation Status: S2 (imperiled)

Description: Herbaceous composite up to 2 m tall. Stem is smooth and somewhat glaucous (covered with a whitish-waxy substance). Basal leaves are rough-pubescent to touch, margins entire to wavy, oval or ovate shaped and to 24 cm long and 16 cm wide. Stem leaves become smaller and sessile upwards and bract-like in the inflorescence. Two – eleven head flowers per stem. Pale yellow ray corolla to 3 cm long and 9 mm wide.

Habitat: Acidic hillside bogs. In Louisiana, only recorded in Vernon Parish.

Occurrence: FPPS07a, FPPS07a2, FPPS09a, FPPS09b, FPPS11b & FPPS11c

Spiranthes longilabris - Lindl.
Family: Orchidaceae
Common Name: Giant spiral ladies' tresses

Rounded Global Heritage Status Rank: G3 (vulnerable)

National Heritage Status Rank: N3 (22Jun2000)

Louisiana Conservation Status: SR (state reported)

Description: Perennial orchid that ranges from 12-60 cm tall, with tuberous root system. Linear to narrowly linear basal leaves with lower portion sheathing stem. Small, white or cream colored flowers that are typically arranged on one side of the spike inflorescence.

Habitat: Frequently burned wet pine savannas, flatwoods, and sandy bogs.

Occurrence: FPPS01a

Not Available

Symphyotrichum drummondii var. ***texanum*** - (Burgess) Nesom
Family: Asteraceae
Common Name: Texas Aster

Global Heritage Status Rank: G5T? (Globally secure, subspecies rank uncertain)

National Heritage Status Rank: N? (30Jul1993)

Louisiana Conservation Status: S1?

Description: Herbaceous composite to 1.2 m tall with primarily stem-born leaves. Mid-stem leaves elliptic-oblong shaped and 6-12 cm long. Upper leaves bract-like in appearance. Numerous diffuse flowering heads with inflorescence branches bearing few bracts. Flowers inconspicuous and generally green – white.

Habitat: Occurs in openings along stream bottoms.

Occurrence: FPPS17b

Not Available

Xyris drummondii - Malme
Family: Xyridaceae
Common Name: Drummond's yellow-eyed grass

Global Heritage Status Rank: G3 (22Dec1997)

National Heritage Status Rank: N3 (28May1993)

Louisiana Conservation Status: S3 (vulnerable)

Description: Flowering scape 4-20 cm long. Basal leaves in fan-shaped arrangement. Leaves are linear-lanceolate and 3-8 cm long. Sheaths of a mature scape as long or slightly shorter than most of the basal leaves. Lance-ovoid shaped spike (4-8 mm long).

Habitat: Moist acidic sands, often in roadside ditches of open, pine forests.

Occurrence: FPPS14a

(Not actual size)

Rare Plant Species of Louisiana

Louisiana Natural Heritage Program
(225) 765-2821

EXPLANATION OF RANKINGS EMPLOYED BY NATURAL HERITAGE PROGRAMS NATIONWIDE

Each element is assigned a single global rank as well as a state rank for each state in which it occurs. Global ranking is done under the guidance of the Science Department of the Nature Conservancy, Washington D.C. State ranks are assigned by each state's Natural Heritage Program, thus a rank for a particular element may vary considerably from state to state.

GLOBAL ELEMENT RANKS

G1 = Critically imperiled globally because of extreme rarity (5 or fewer known extant populations) or because of some factor(s) making it especially vulnerable to extinction
G2 = Imperiled globally because or rarity (5 to 20 known extant populations) or because of some factor(s) making it very vulnerable to extinction throughout its range.
G3 = Either very rare and local throughout its range or found locally (even abundantly at some of its locations) in a restricted range (e.g., a single physiographic region) or because of other factors making it vulnerable to extinction throughout its range (21-100 known extant populations)
G4 = Apparently secure globally, though it may be quite rare in parts of its range, especially at the periphery (100 - 1000 known extant populations).
G5 = Demonstrably secure globally, although it may be quite rare in parts of its range, especially at the periphery (1000+ known extant populations).
GH = Of historical occurrence throughout its range, i.e., formerly part of the established biota, with the possibility that it may be rediscovered (e.g., Bachman's warbler).
GU = Possibly in peril range-wide but status uncertain; need more information
G? = Rank Uncertain. Or, a range (G3G5) delineates the limits of uncertainty
GQ = Uncertain taxonomic status
GX = Believed to be extinct throughout its range (e.g., Passenger Pigeon) with virtually no likelihood that it will be rediscovered
T = Subspecies or variety rank (e.g., G5T4 applies to a subspecies with a global species rank of G5, but with a subspecies rank of G4

WETLAND CODES

FAC - Facultative (similar likelihood (33-67 %) of occurring in both wetlands and nonwetlands)
FACW - Facultative Wetland (usually (>67-99%) in wetlands)
OBL - Obligate Wetland (almost always (>99%) in wetlands
Species with a "---" ranking are not listed as wetland species.

STATE ELEMENT RANKS

S1 = Critically imperiled in Louisiana because of extreme rarity (5 or fewer known extant populations) or because of some factor(s) making it especially vulnerable to extirpation.
S2 = Imperiled in Louisiana because of rarity (6 to 20 known extant populations) or because of some factor(s) making it very vulnerable to extirpation
S3 = Rare and local throughout the state or found locally (even abundant at some of its locations) in a restricted region of the state, or because of other factors making it vulnerable to extirpation (21 to 100 known extant populations).
S4 = Apparently secure in Louisiana,with many occurrences (100-1000 known extant populations).
S5 = Demonstrably secure in state (1000+ known extant populations).
SA = Accidental in state,including species (usually birds or butterflies) recorded once or twice or only at great intervals, hundreds or even thousands of miles outside their usual range.
SH = Of historical occurrence in Louisiana but no recent records verified within the last 20 years; formerly part of the established biota, possibly still persisting.
SR = Reported from Louisiana, but without conclusive evidence to accept or reject the report.
SU = Possibly in peril in Louisiana but status uncertain; need more information
SX = Believed to be extirpated from Louisiana

LOUISIANA NATURAL HERITAGE PROGRAM
LOUISIANA DEPARTMENT OF WILDLIFE AND FISHERIES
P.O. BOX 98000
BATON ROUGE, LA 70898-9000
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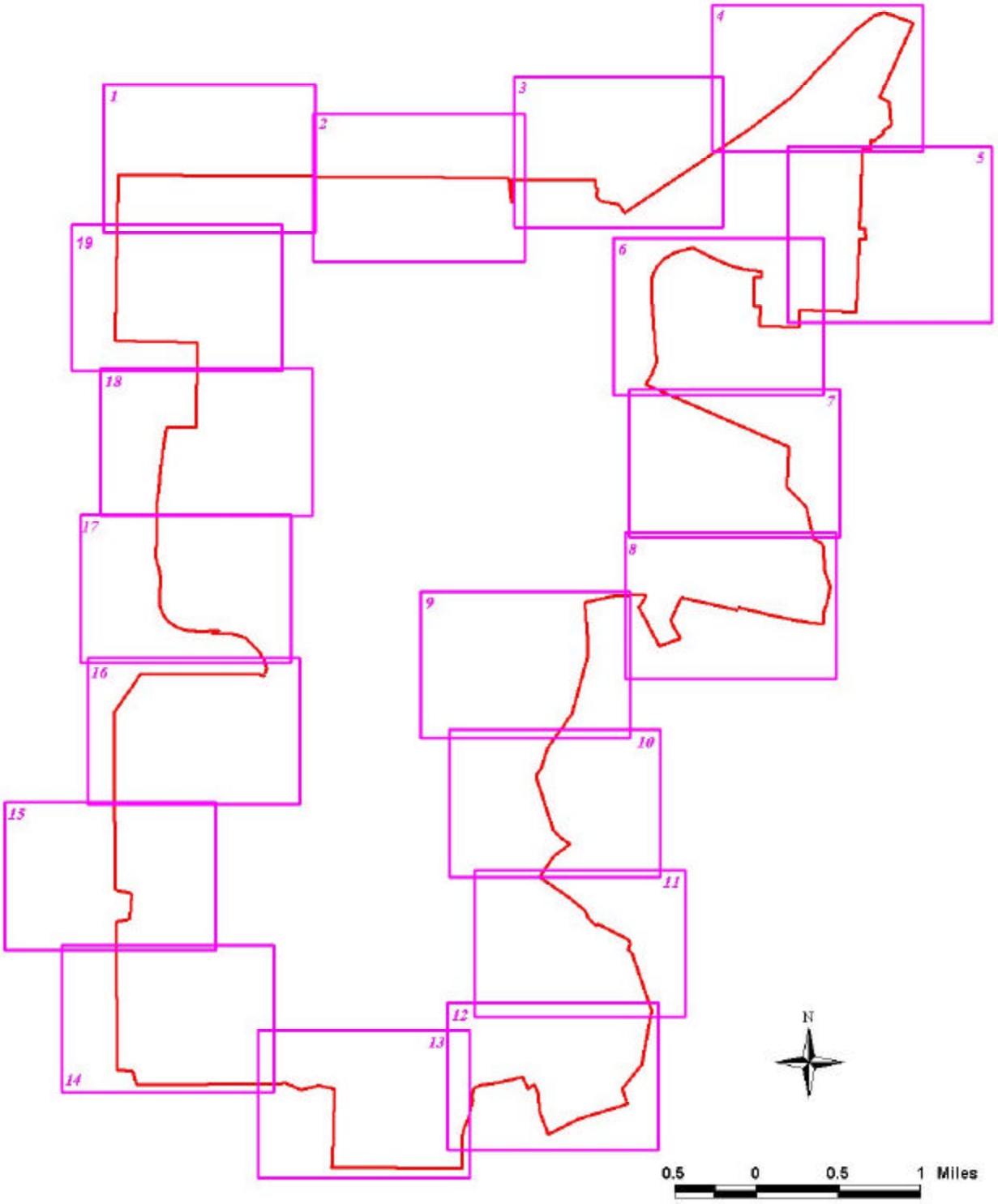
600 Security Fence Wetland and Sensitive Plant Species Survey Maps

Fort Polk, LA - Cantonment Fence Project

Wetland and Sensitive Plant Species Survey
Map Index

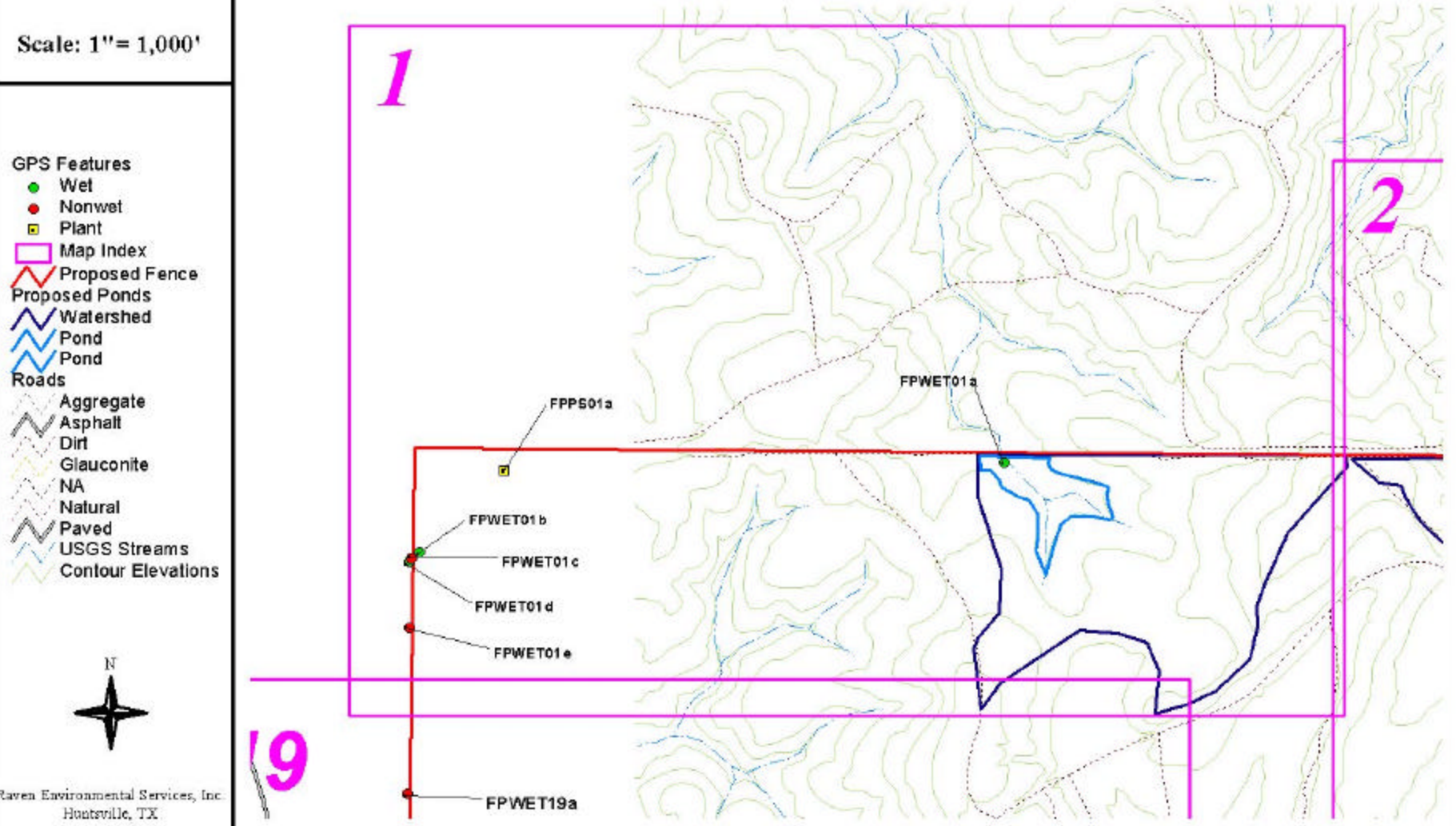


Fort Polk, LA - Cantonment Fence Project

Wetland and Sensitive Plant Species Survey

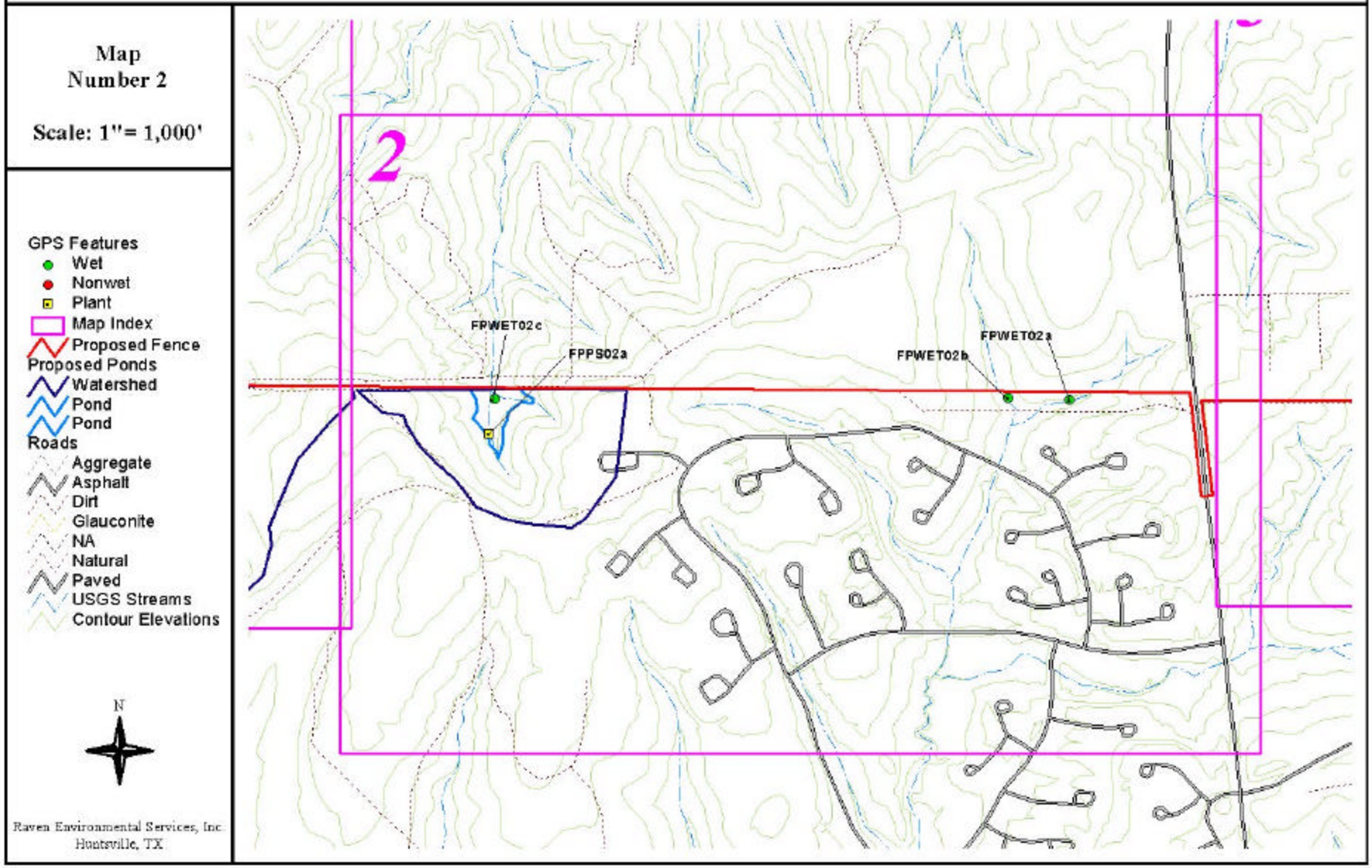
Map
Number 1

Scale: 1"= 1,000'



Fort Polk, LA - Cantonment Fence Project

Wetland and Sensitive Plant Species Survey

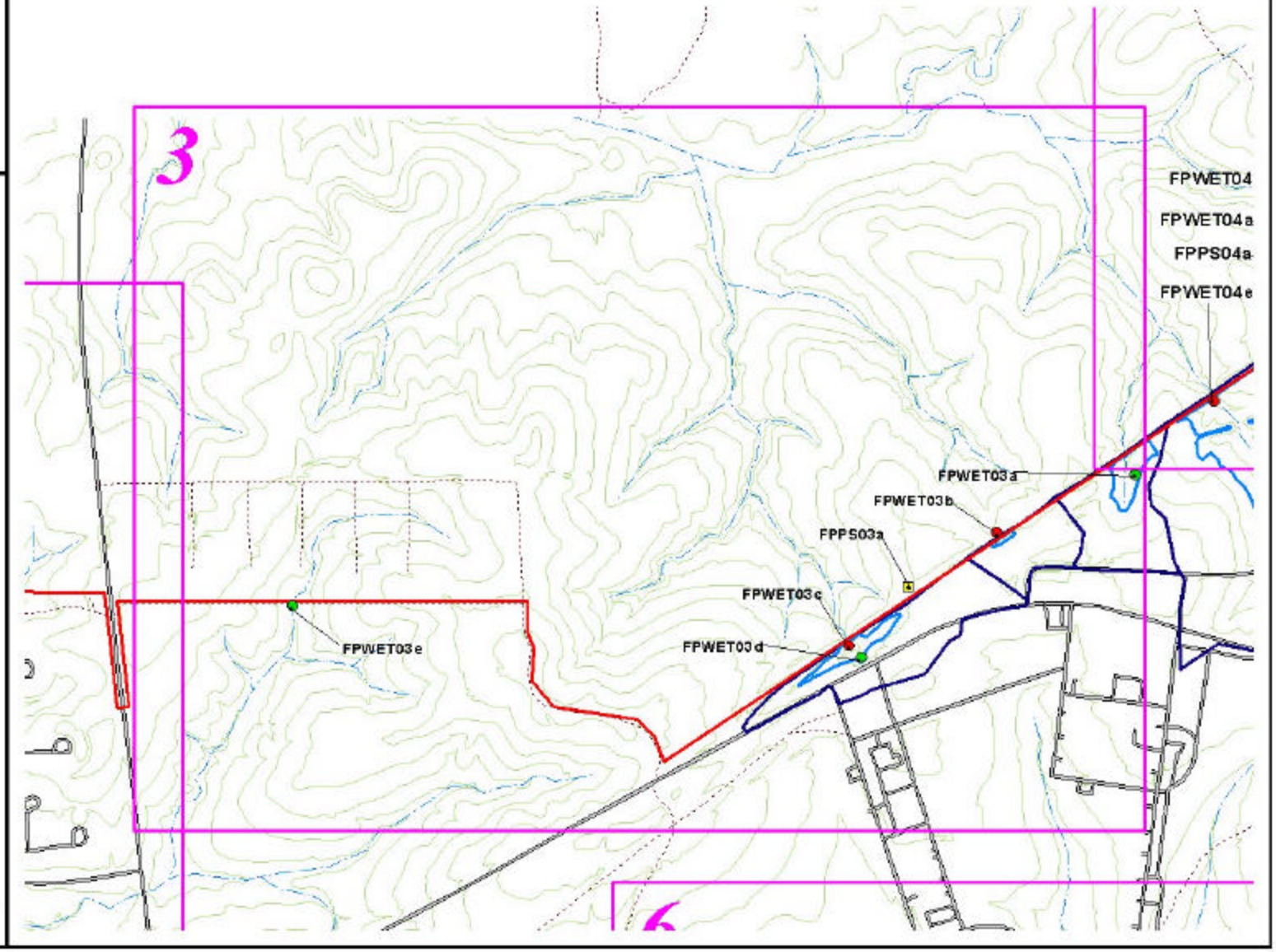


Fort Polk, LA - Cantonment Fence Project

Wetland and Sensitive Plant Species Survey

Map
Number 3

Scale: 1"= 1,000'



GPS Features
- Wet
- Nonwet
- Plant
- Map Index
- Proposed Fence

Proposed Ponds
- Watershed
- Pond
- Pond

Roads
- Aggregate
- Asphalt
- Dirt
- Glauconite
- NA
- Natural
- Paved

USGS Streams
Contour Elevations

N

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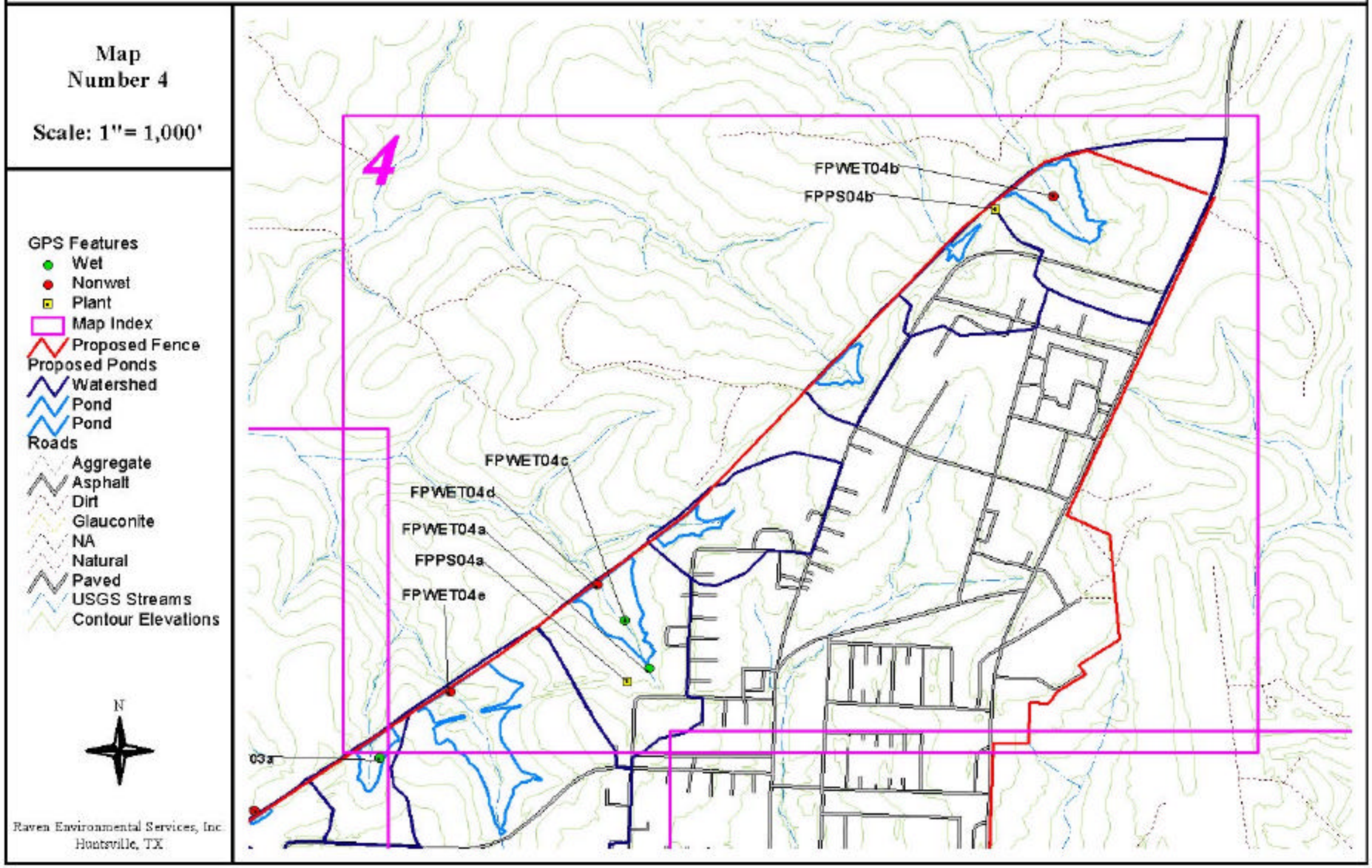
Fort Polk, LA - Cantonment Fence Project

Wetland and Sensitive Plant Species Survey



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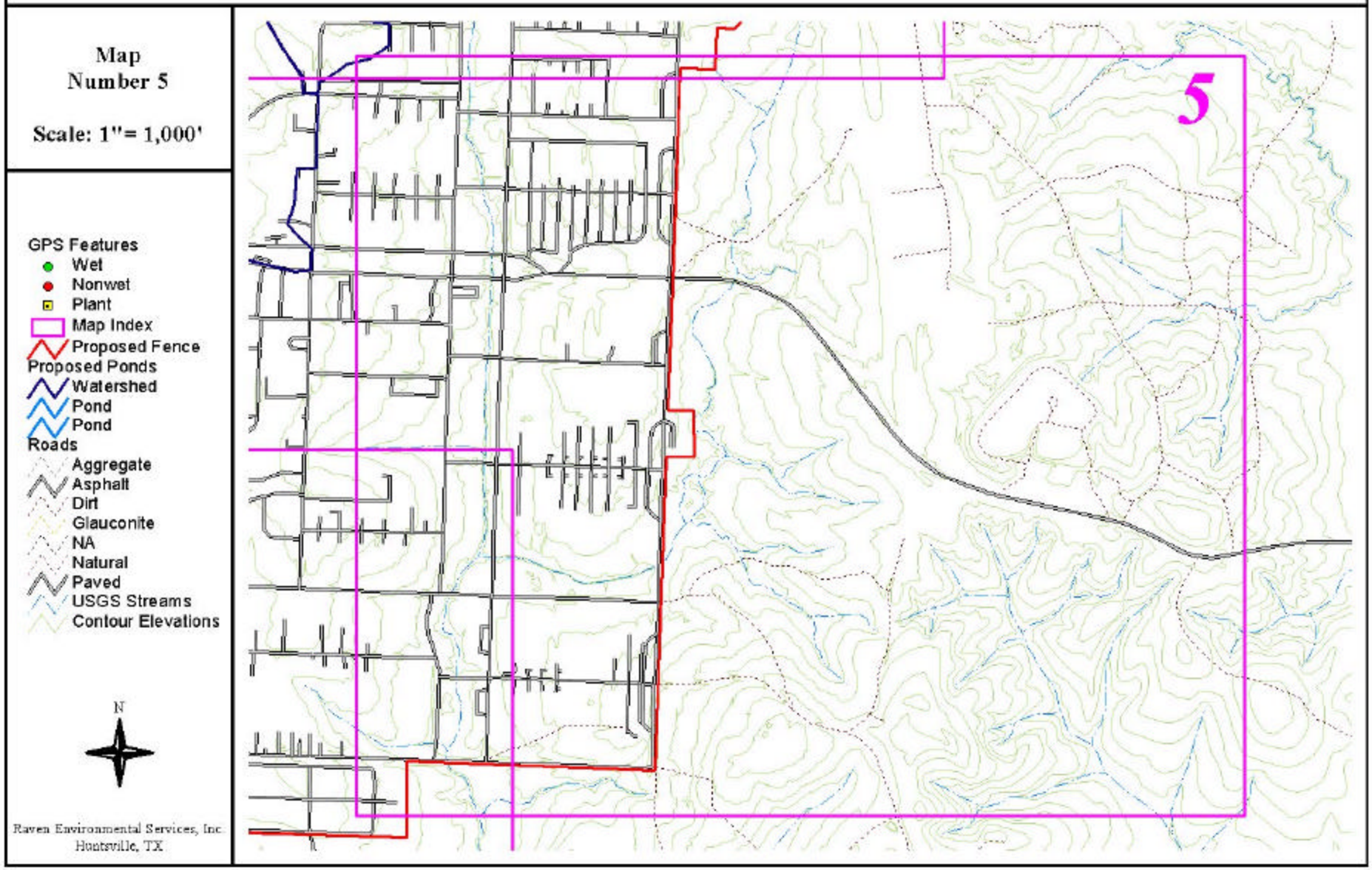
Wetland and Sensitive Plant Species Survey



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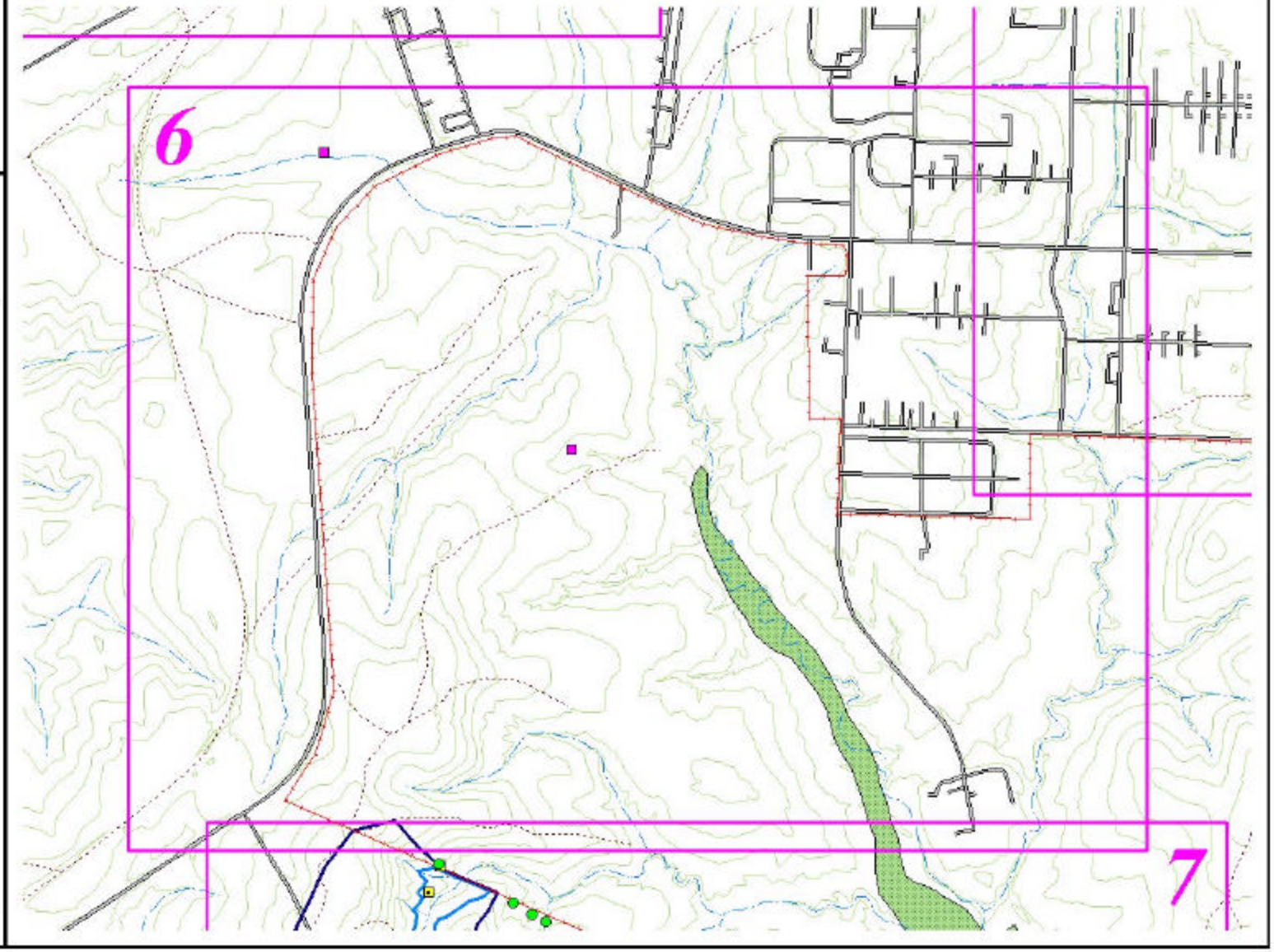
Wetland and Sensitive Plant Species Survey

Map Number 6
Scale: 1"= 1,000'



GPS Features
- Nonwet
- Plant
- Wet
- Fencedrgcorcon.shp
- Map Index
- RCW Trees
- FP Taxa

Proposed Ponds
- Watershed
- Pond
- Pond

Roads
- Aggregate
- Asphalt
- Dirt
- Glauconite
- NA
- Natural
- Paved

- USGS Streams
- FP Wetlands
- Contour Elevations

N

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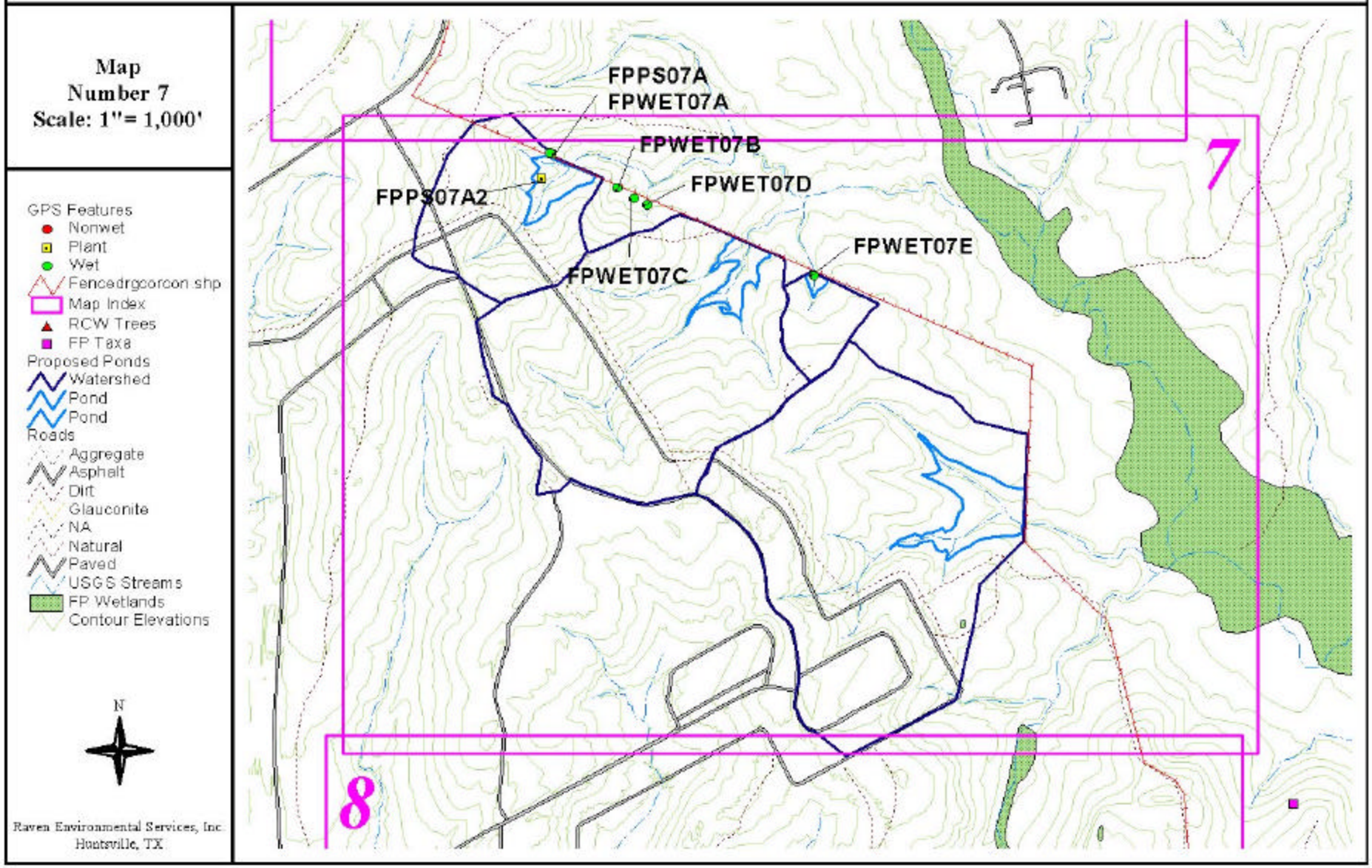
Wetland and Sensitive Plant Species Survey



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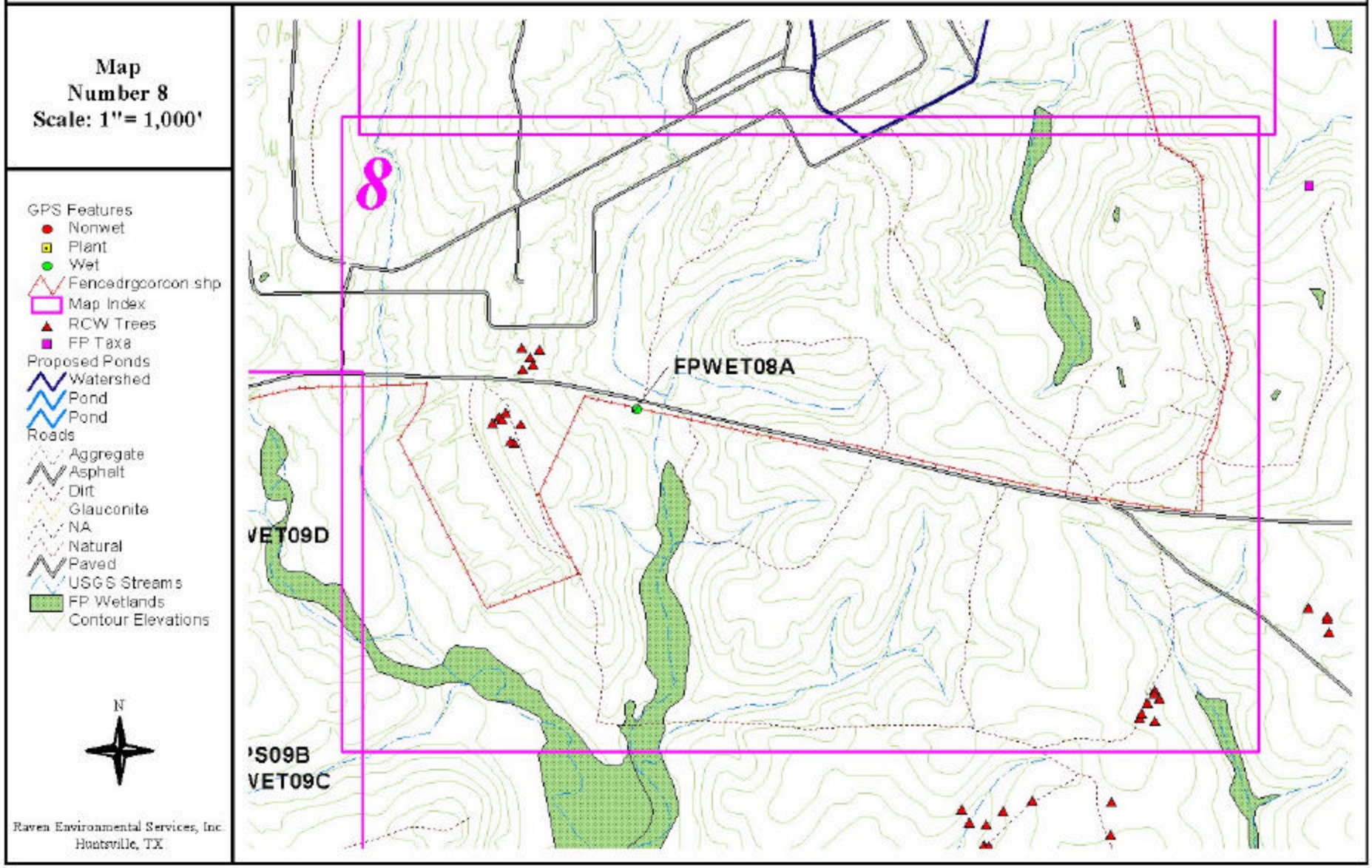
Wetland and Sensitive Plant Species Survey



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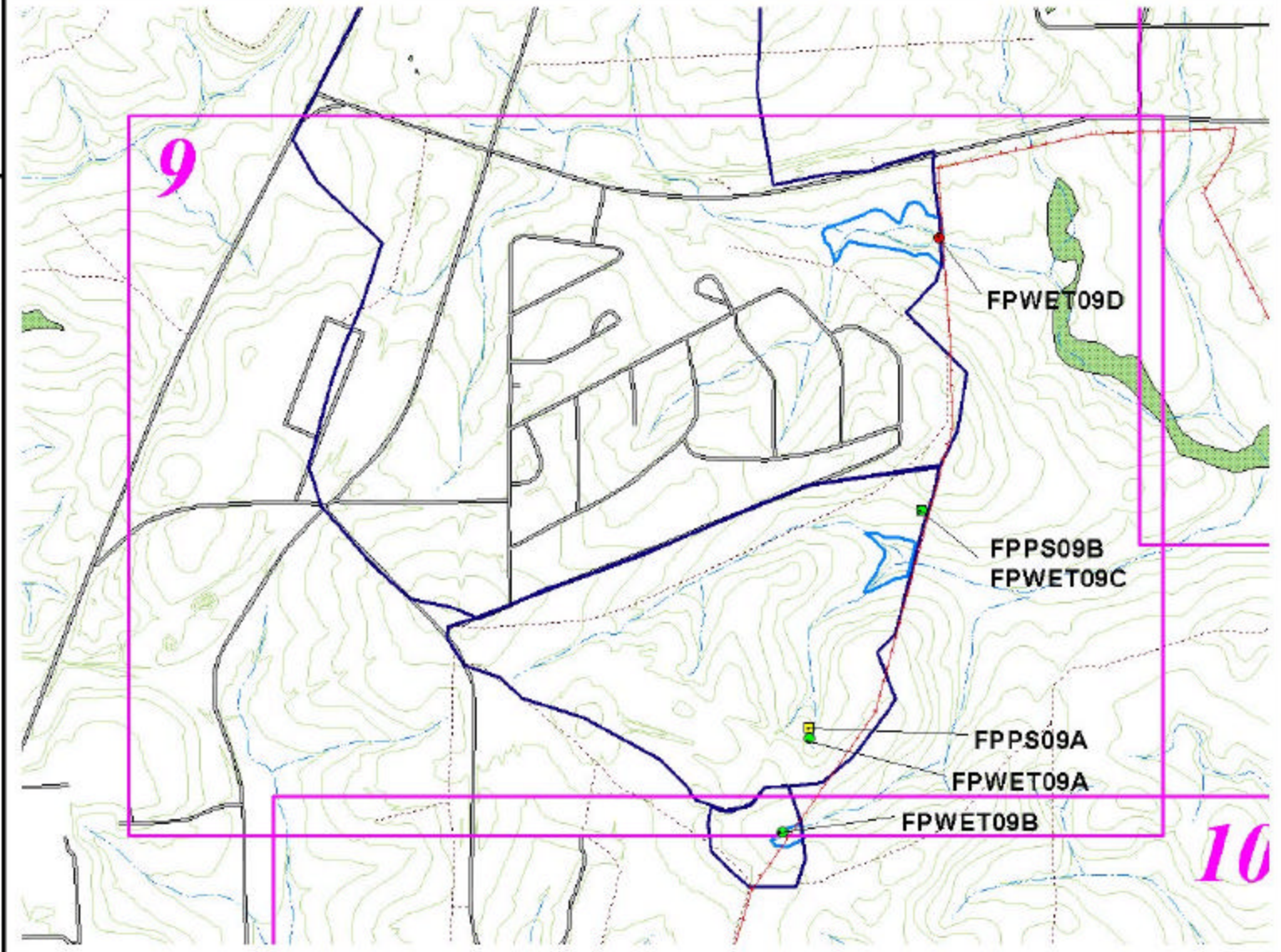
Wetland and Sensitive Plant Species Survey

Map Number 9
Scale: 1"= 1,000'



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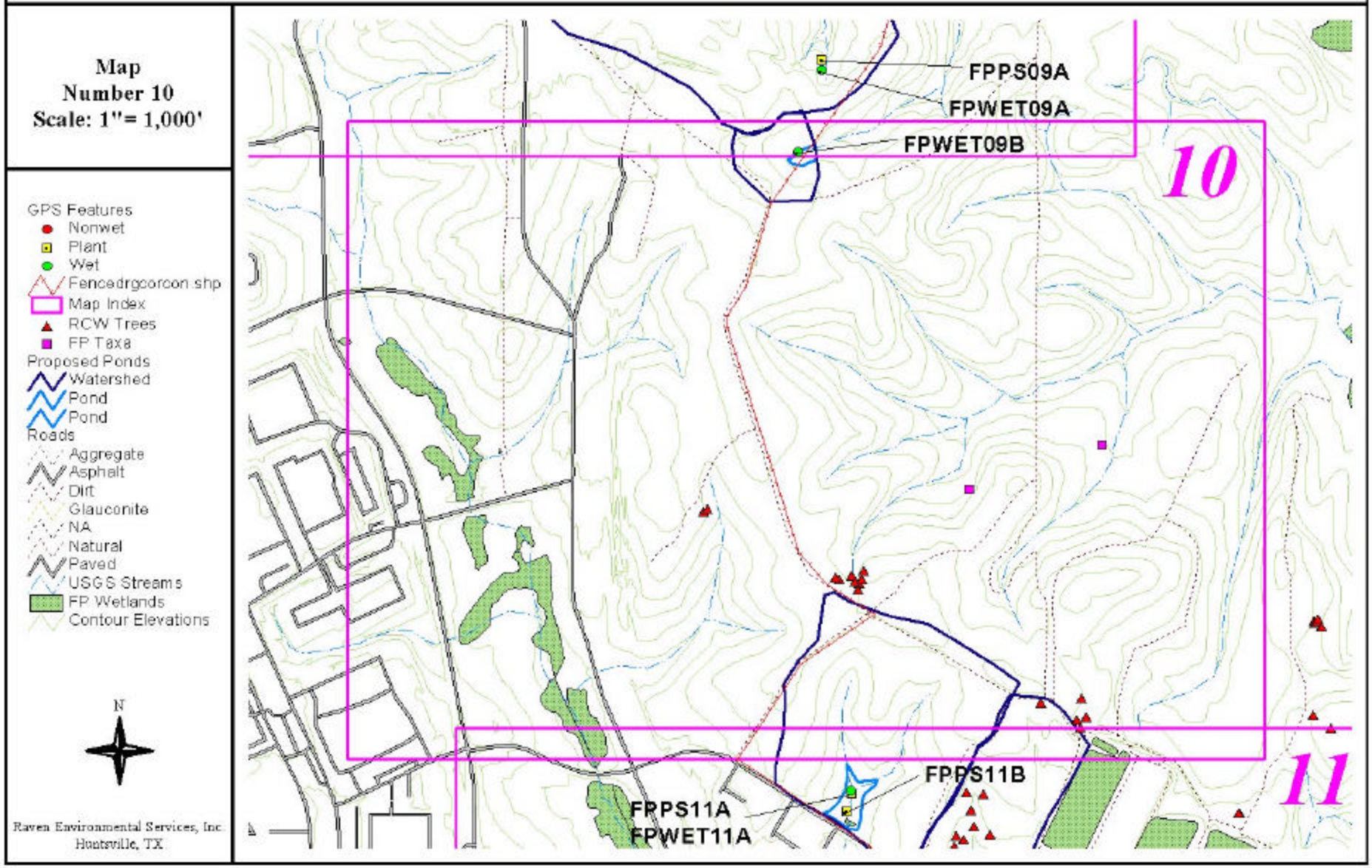
Wetland and Sensitive Plant Species Survey



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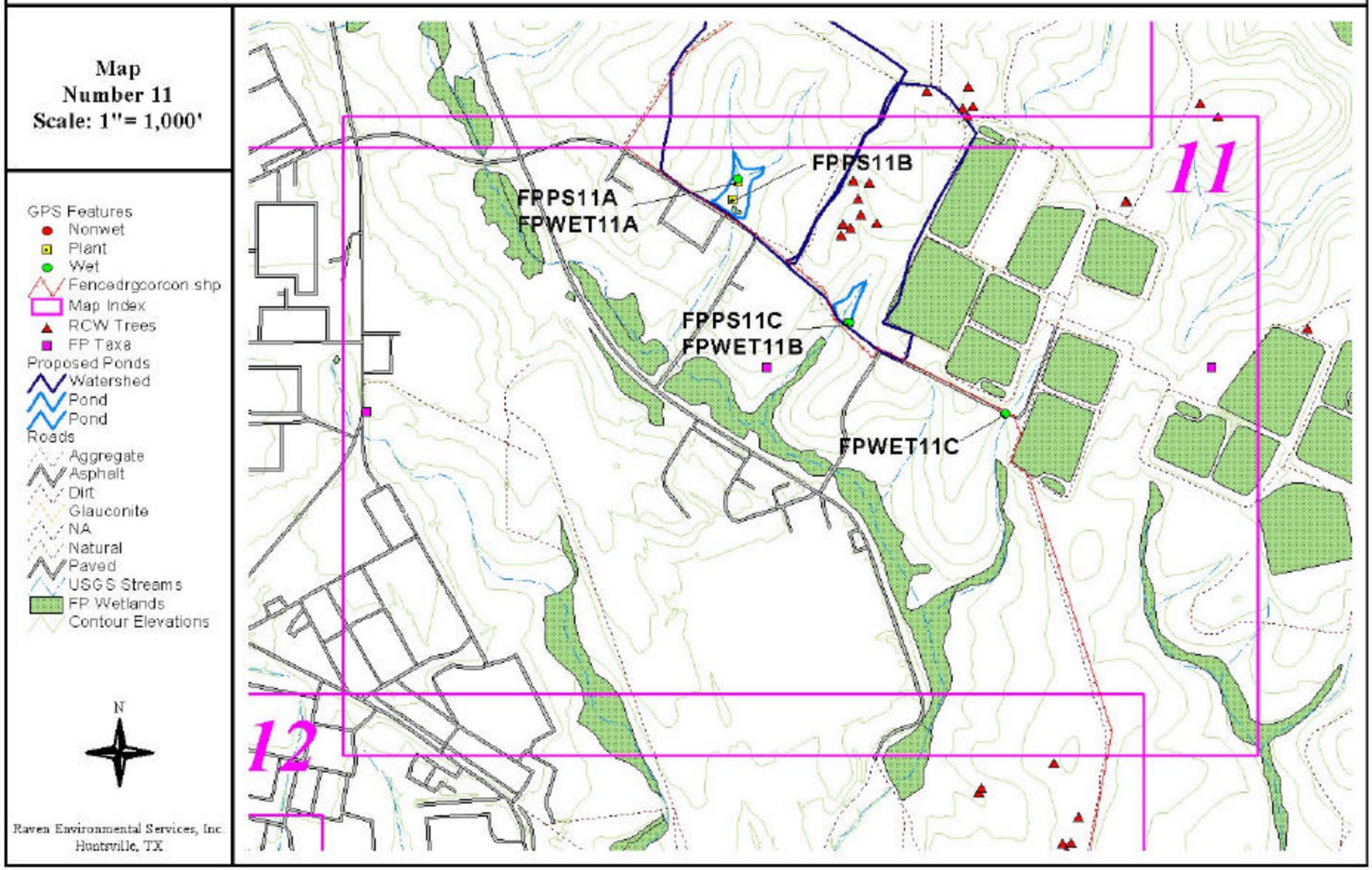
Wetland and Sensitive Plant Species Survey



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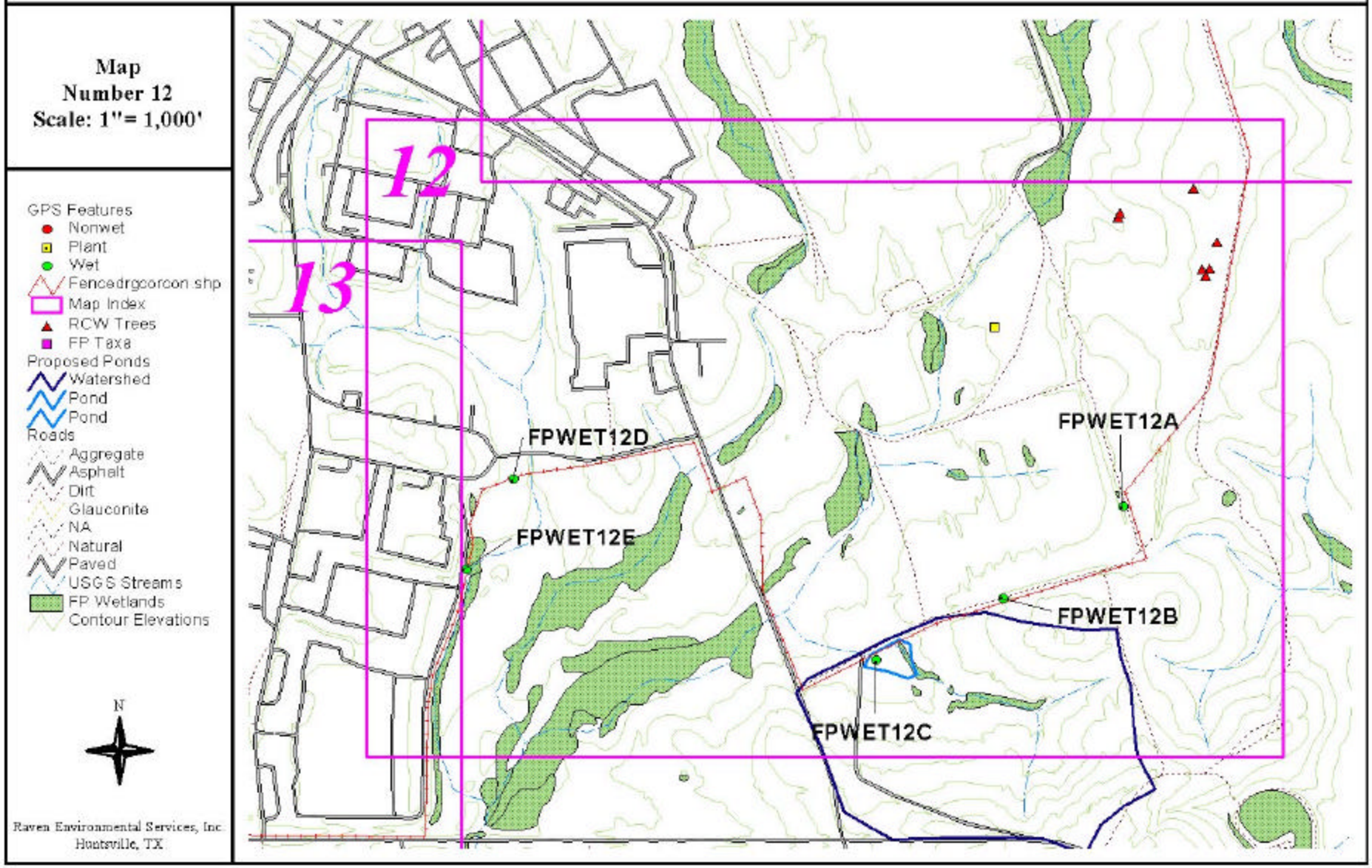

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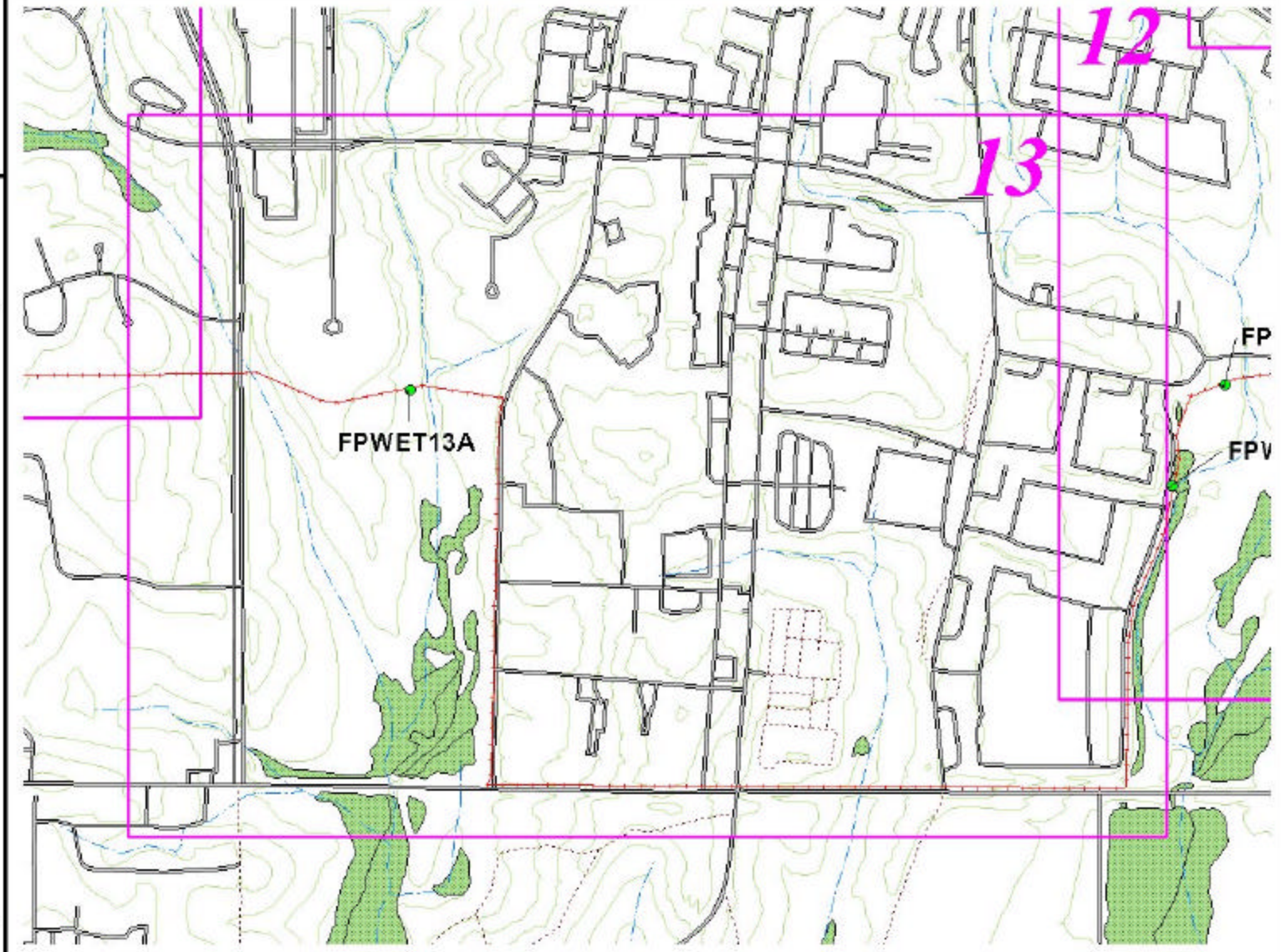
Wetland and Sensitive Plant Species Survey

Map Number 13
Scale: 1"= 1,000'



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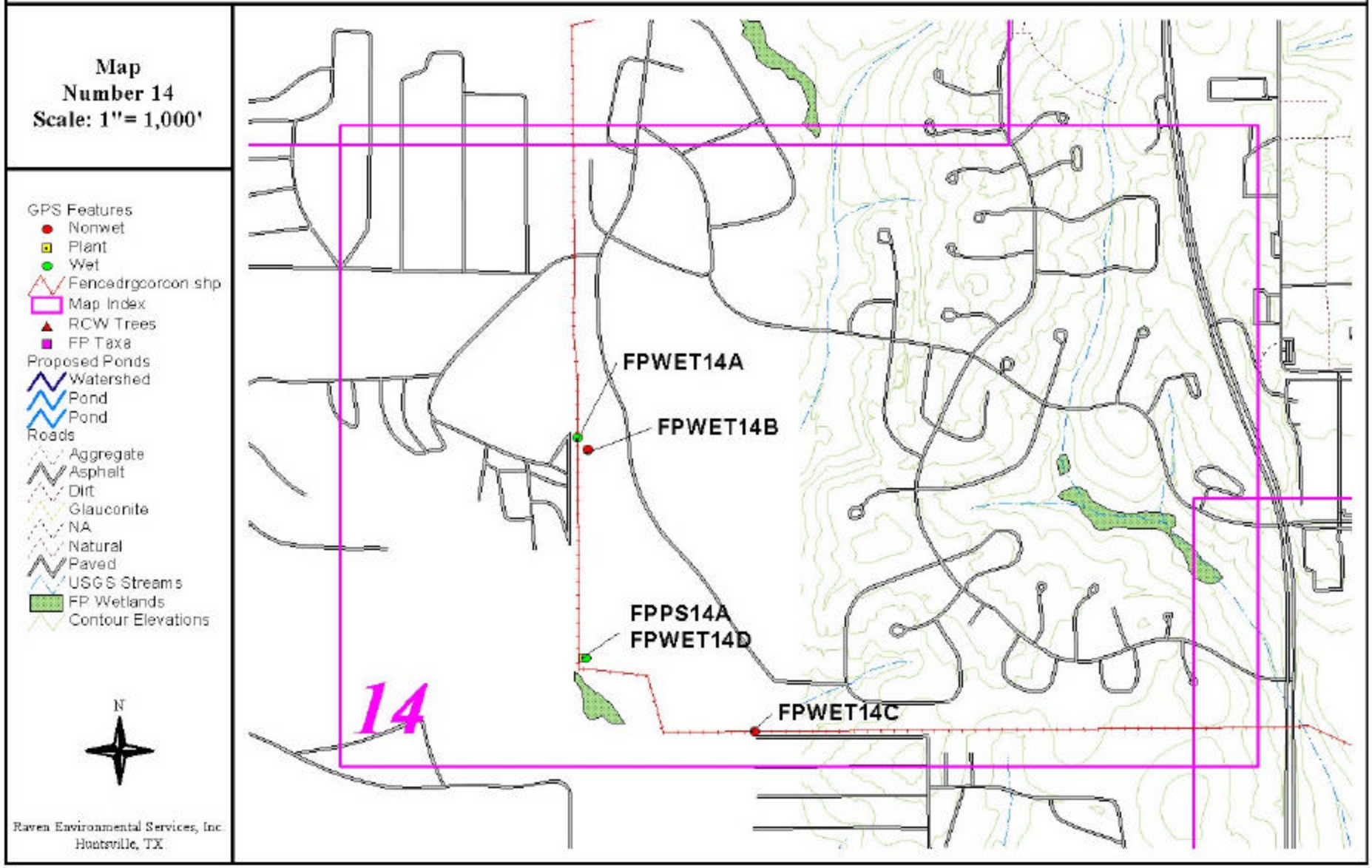
Wetland and Sensitive Plant Species Survey



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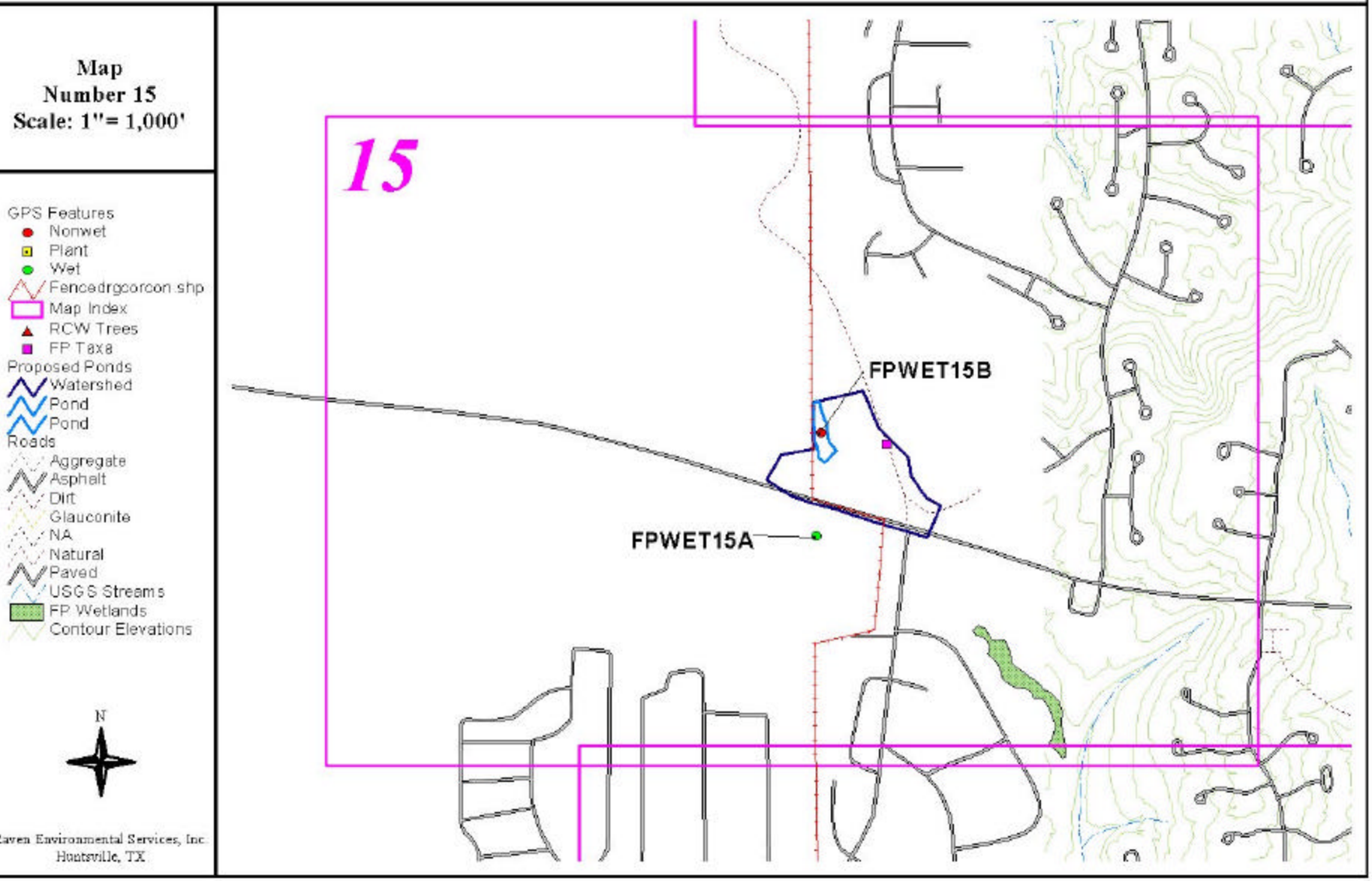
Wetland and Sensitive Plant Species Survey

Map Number 15
Scale: 1"= 1,000'



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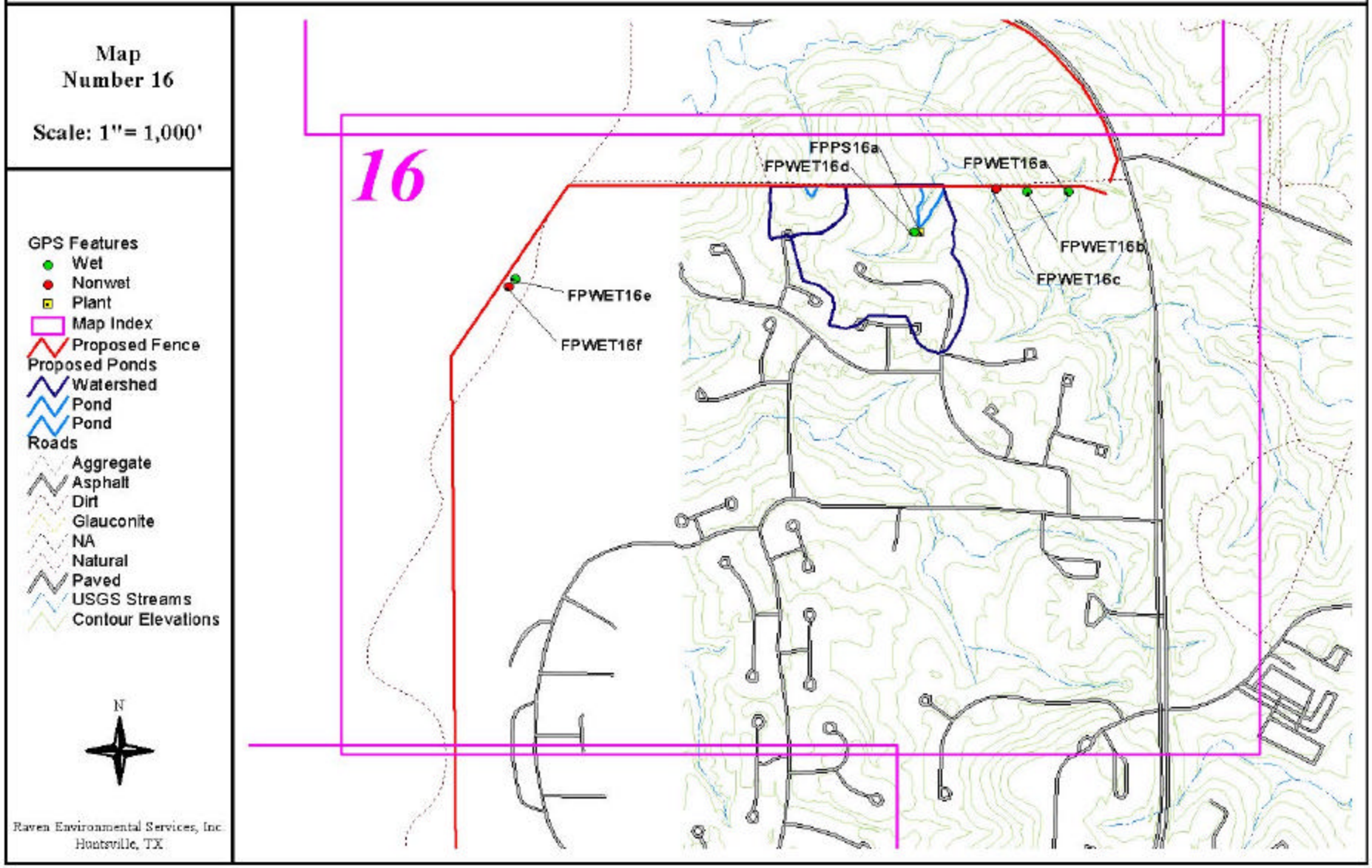

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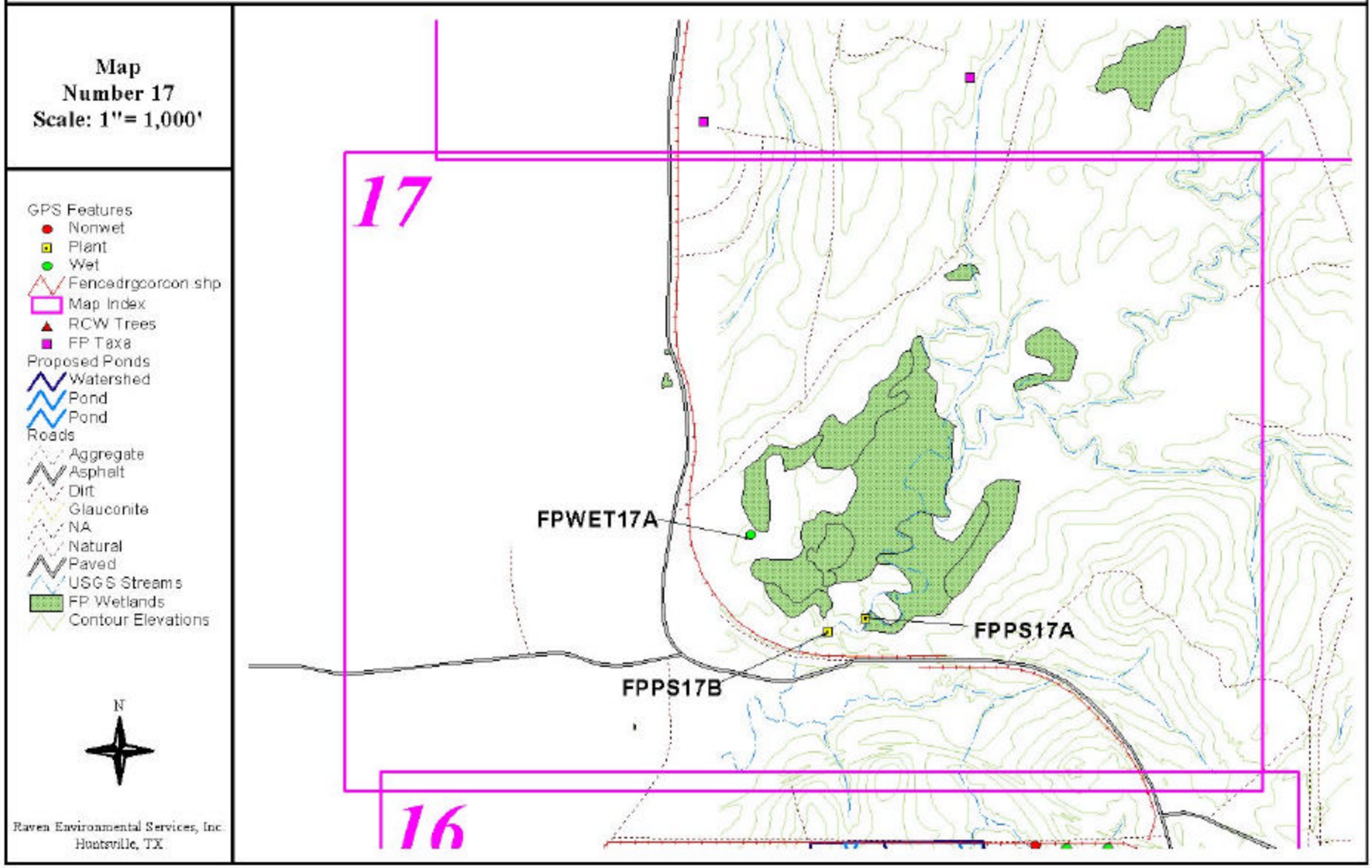
Wetland and Sensitive Plant Species Survey



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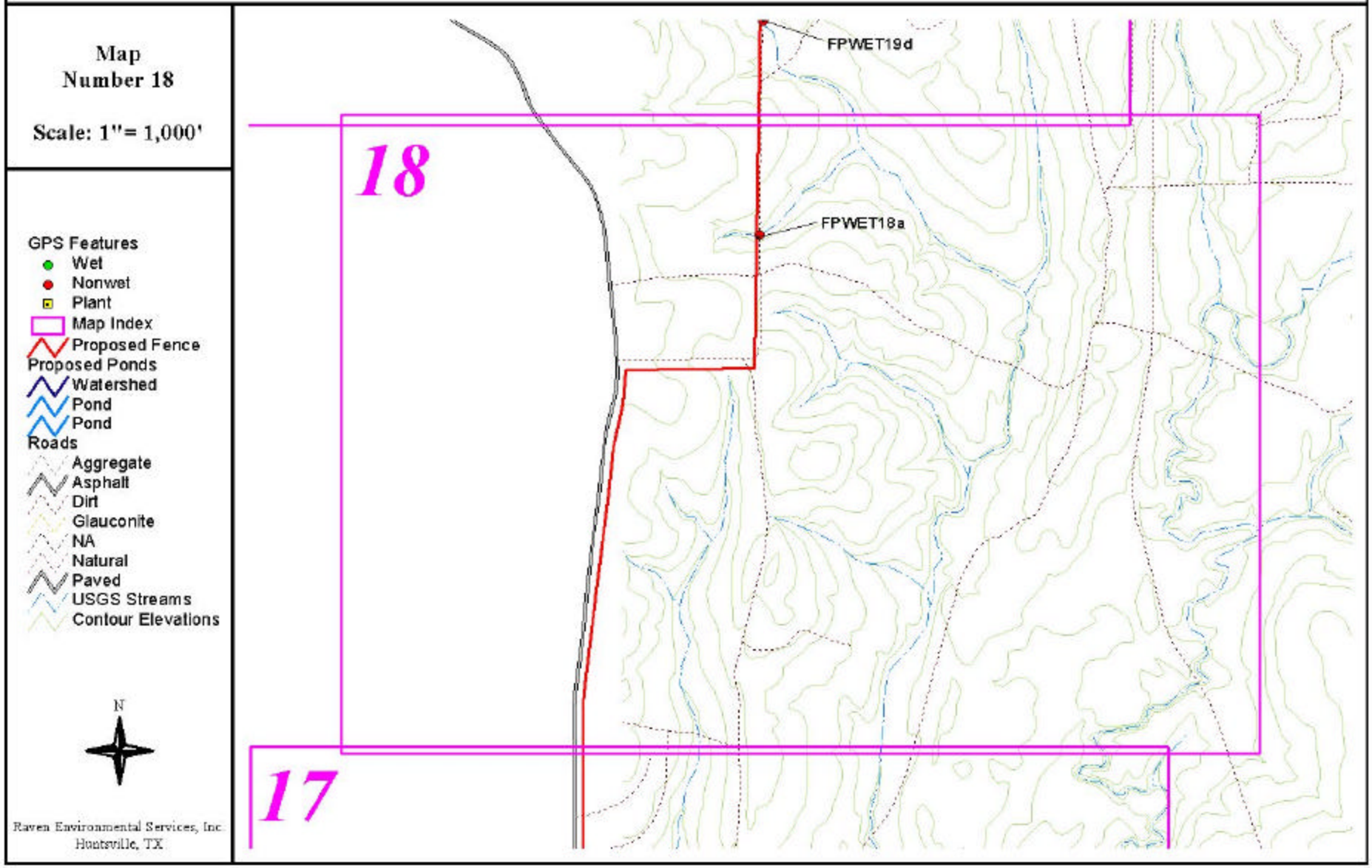
Wetland and Sensitive Plant Species Survey



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